information for action

issue paper

Women and Health

World Federation of Public Health Associations

08515

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Prepared for the Aga Khan Foundation and UNICEF

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MARCH 1986

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This publication was prepared under the auspices of the World Federation of Public Health Associations, Susi Kessler, Executive Secretary. Funding was provided by the Aga Khan Foundation and the United Nations Children's Fund (UNICEF) under contract 83-C-125.

Other publications in the information for Action series:

Oral Rehydration Therapy (resource guide)—1983
Maternal Nutrition (resource guide)—1983
Training Community Health Workers (issue paper)—1984
Immunizations (issue paper)—1984
Program Activities for Improving Weaning Practices (issue paper)—1984
Information for Management of Primary Health Care (resource guide)—1984
Primary Health Care Bibliography and Resource Directory—1984
Maternal Health (issue paper)—1984
Growth Monitoring (issue paper)—1985
Health Education (issue paper)—1986

ISBN 0-87553-142-3
Cover photo: ICEF 4756, Holton
Typesetting and Printing: Automated Graphic Systems
White Plains, MD, USA

WH-100
08515 N86
HEALTH CELL

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WHO 8929/Schwab.

Executive Summary

Women are important to primary health care in three ways: as direct beneficiaries, as mothers and family members, and as frontline health workers outside the home. All three roles, but especially the first, must be emphasized in order to reduce morbidity and mortality in developing countries.

Special emphasis on women's and girls' own health is needed partly because it has been neglected in the past, and partly because women contribute critically both to family health and survival and to the national economy. Women carry much of the responsibility for world production—in the family, on the farm, in both traditional and modern-sector industries, and in commerce. In Africa, for example, women contribute 60-80 percent of agricultural labor, while in the Republic of China, South Korea, Malaysia, and elsewhere, women are the (poorly paid) backbone of many new industries. An estimated 18 to 30 percent of the world's families are solely supported by women, while in many others, women's financial contribution is a substantial component. These essential contributions are often overlooked because statistics miss family and informal-sector activities and because data, even when collected, are not disaggregated by sex.

The selective health technologies that are the focus of so much action today—growth monitoring, oral rehydration, breastfeeding, and immunization—require time commitments on the part of families, particularly healthy women, in order to be successful. Women cannot effectively work toward the Child Survival and Development Revolution if they themselves are too overworked, malnourished, and sick to deliver and raise healthy babies. A woman's own health, especially her nutritional status, is a key determinant of her child's survival, both during the neonatal period and throughout breastfeeding. A woman's existing workload, in both its daily and seasonal dimensions, largely determines time available for growth monitoring, immunizations, preparation of weaning foods, and routine health care. A woman's status in the family, itself dependent on personal income and education, greatly affects food distribution and decision-making about health care. In brief, the Child Survival and Development Revolution will not happen without women—as participants and beneficiaries as well as agents.

Women's Health Concerns

Existing literature and data on primary health care worldwide rarely distinguish between male and female participants or analyze the potential roles of the two sexes as beneficiaries, providers, and family care givers. Often available information is either highly generalized or so focussed on long-term structural change as to be of little use in day-to-day programming. The undervaluation of women is clearly a long-term problem, yet there is a great deal that empathetic health managers of both sexes can do within prevailing socioeconomic constraints.

In identifying women's health problems, managers and local women's leaders should focus on the problems causing greatest hardship. Many of women's problems, such as stress and sexually transmitted diseases, are similar to men's but harder to identify because symptoms are less obvious in women or because women do not come for treatment. Other health problems, such as malnutrition, malaria, and occupational hazards, are more serious for women because they bear and raise children. A third set of problems, such as abortion and spouse abuse, affect only women.

Worldwide, three problem areas require special attention. Possibly the most important is nutrition, in terms of both food quantity and quality, not just during pregnancy, but in childhood, between pregnancies, and afterwards as well. Nutritional status affects women's health and the survival chances of newborns and breastfeeding infants. In childhood, preferential feeding sometimes discriminates against girls, while in pregnancy it limits the mother's weight gain and hence the baby's birthweight. The nutritional requirements of breastfeeding are equal to or greater than those of pregnancy. Worldwide, 50 percent of women are anemic, hence weak and susceptible to disease. Many men and boys are malnourished too, but the higher status of males often ensures that they are fed first and best.

Closely linked to nutrition is reproduction and the enormous responsibilities and burdens it imposes on females, from childhood onwards. Since girls will be mothers, in some societies it is considered unnecessary to educate them, while the threat of sexual contact causes them to be secluded from males. Childhood malnutrition and circumcision cause problems both at the time they occur and later during the reproductive years. Maternity, even when it goes well, is a debilitating process from which those with poor nutrition and closely spaced pregnancies never recover. For many women, it leads to death during abortion or childbirth. Studies estimate that 5.6 million infant deaths and 200,000 maternal deaths could be prevented each year if births were optimally timed and spaced and did not exceed five in total. Many women who want to delay or prevent childbirth do not have access to contraceptive information and services. Even desired and medically optimal pregnancies can be problematic for both mothers and children.

A third major problem area for women in many countries is domestic violence and other physical abuse. Statistics on this subject are generally unavailable, but many women clearly suffer. Female circumcision and unsafe abortion also cause lasting and sometimes fatal injury to many women.

Ecuadoran woman on her way to market. IDA/World Bank/ Daughters.

Underlying Causes

Women's *socioeconomic status*, both generally and in terms of education and personal income, greatly affects their own health and the health of their children. Low status leads to discriminatory feeding and health care for young girls and sometimes to overt female infanticide. It also affects women's access to health information and resources (including food) for themselves and their children, and their influence in family decision-making and resource allocation.

A second element of women's situation that affects health is *total workload*, with important seasonal and life-cycle variations. Women who spend four hours or more per day fetching water and fuel lack time to attend clinics or growth monitoring sessions. They are likely to be constantly fatigued and vulnerable to infection. Anemia and frequent childbearing further aggravate these conditions. Primary health care programs may place additional demands on women—for preparing ORT and weaning foods, for arranging immunizations, and for serving as volunteers.

Women's *daily and seasonal activity patterns* also greatly affect personal and family health. Women who work in and around water may be exposed to schistosomiasis, worms, malaria, and other water-related conditions. Women who work in informal industries are rarely protected by occupational health laws. On the other hand, their income contributes directly to family survival chances and nutrition. The nature of employment outside the home can greatly affect breastfeeding and weaning practices. Most women who work do so because they have to in order to ensure family survival.

Improving Women's and Children's Health

The four life-saving "technologies" promoted by the Child Survival and Development Revolution are unlikely to be effective without adequate attention to women's own socioeconomic and health status, work burdens, and daily activities. Special efforts are needed, not just to strengthen existing programs, but also to make them more responsive and accessible to women. Two cardinal primary health care elements—community participation and intersectoral action—are critical.

While women's conditions vary greatly, most primary health care programs should include:

- efforts to improve women's and girls' nutritional status,
- family planning—to delay the first pregnancy, to space subsequent births, to limit total births, and to prevent unwanted conceptions,
- antenatal, delivery, and postpartum care, and
- locally relevant action against violence and other forms of physical abuse.

In addition to supporting appropriate interventions, health managers should also work to make all services more accessible and culturally appropriate for women. In some countries, women use services, especially preventive ones, much less than their fertility and morbidity patterns require. While reasons are complex, access and utilization can often be improved by:

- offering more female-oriented health services,
- hiring more women as health workers,
- reducing the distance women must travel or the time they must wait,
- scheduling clinics conveniently, with related services on the same day so that women do not have to return unnecessarily,
- improving privacy,
- reducing or abolishing charges for preventive care, and
- training staff to be sensitive and responsive to women's needs.

Even with these measures, some women may prefer to deal with traditional practitioners, and in many countries upgrading of, and collaboration with, such practitioners can contribute significantly to women's health.

Intersectoral action is needed to increase female school enrollments, to educate adult women, and to improve

women's access to credit and employment. Women's household burdens should be reduced to facilitate better childcare, to make use of clinical services more feasible, and to reduce the huge time and energy drain of preparing foods and carrying water and fuel. Family planning should be promoted, not just for physiological reasons, but also because it frees women's time for education and employment.

In the long run, it is clear that women's health status and the health status of young girls cannot be significantly improved without additional action to uplift women's overall social and economic conditions. Many health problems are due as much to poverty as to any specific pathogen or food deprivation. Many others are due to outright favoritism shown to boys and men. Health personnel can help by hiring and paying women, by publicizing women's family and community roles, and by educating national leaders and the public at large about the detrimental health and social effects of women's low status and differential feeding practices.

Above all, women's full participation as planners, implementers, and evaluators is essential. Much can be learned about women through reading and research, but there is simply no adequate substitute for first-hand knowledge of local communities and individual women. Health care systems must be adapted to women's situations in specific locations, and women are unlikely to contribute their immense knowledge and resources for this unless they help choose priorities and make other decisions. Women's participation can significantly reduce health workers' burdens and make primary health care more effective. Working with and for women should be an end in itself, but it can also contribute significantly to improved family health and national economic development.

Build on Women's Strengths

Perhaps unavoidably, this report presents a negative view of women's health and social status, not just in developing countries, but in the United States, Europe, and elsewhere as well. It also makes suggestions that might lead to "reverse discrimination" to help women catch up with men. Many readers will doubt the validity of this information and the appropriateness of recommendations for specific locations.

These doubts are appropriate and should be considered in reading this book. Women nearly everywhere have developed strong coping mechanisms, ways of working behind the scenes, and ways of compensating for some of the discrimination they have experienced. Almost no one suffers from all of the difficulties mentioned, and many times men suffer more than women. Material presented here should alert readers to possible problems, not bias their own local information-gathering and decision-making. It is important that health personnel recognize women's strengths as well as the serious disadvantages that women may face. These strengths can be used to help women improve their own lives and health.

Box 1: WOMEN AND THE EIGHT ESSENTIAL ELEMENTS OF PRIMARY CARE

1. Women are largely responsible for providing education for the promotion of health and the prevention of disease.
2. Women are the primary processors, storers, and preparers of food supplies and are in charge of proper nutrition. They work towards increasing and improving the food supply by processing and preserving food to maximal advantage and distributing the available food equitably within the family. Women should also be oriented towards early detection of malnutrition and the measures which should be taken to reverse the condition.
3. Women are the haulers, storers, and distributors of water and the managers of basic sanitation at the family level and often also at the community level. It is primarily women's responsibility to introduce sound personal hygiene practices, promote the use of latrines, and to ensure that clean water is used for drinking and other domestic purposes.
4. Women are the main users and promoters of immunization for themselves and their children.
5. Women are the main providers of maternal and child care, including family planning, since most of the relevant actions and decisions take place within the family. They also initiate self-help, such as first aid for childhood accidents; they make decisions to utilize health services for themselves and other members of the family.
6. Women play a major role in the prevention and control of locally-prevalent diseases and are involved in preventive treatment, early detection of symptoms, decisions to seek care, compliance with prescribed treatment, and environmental activities aimed at prevention and protection.
7. Women usually predominate in the treatment of common diseases and injuries in the home or in the form of first aid.
8. Women serve as producers and as collectors of the basic ingredients of some drugs. Keeping drugs away from dampness and heat and out of reach of children is usually done by women.

Source: 379, pp. 134–138.

SECTION I: Women Are Important As Both Beneficiaries And Caregivers In Primary Health Care

Women are responsible for many essential activities in the home. PAHO/Vizcarra.

CHAPTER I

The Biological Aspects Of Women's Health

Women's health needs resemble those of men, but also differ in several key respects. Women suffer from parasites, tuberculosis, schistosomiasis, leprosy, malaria, and other fevers and diseases just as men do. As infants and children, girls, like boys, die from diarrhea, upper respiratory infections, measles, household accidents, and other common conditions, many related to malnutrition. Most causes of morbidity and mortality derive from poverty, not from gender, so why worry especially about women and girls?

There are five reasons:

- because women have special health problems that men do not experience.
- because women are more vulnerable to certain conditions than are men,
- because certain health conditions are less easily detected among women than among men,
- because women's health directly affects child survival chances, and
- because women's needs are often neglected if not specifically identified.

This chapter discusses the biological aspects of women's health, since most health planning starts that way, but the underlying causes are usually sociocultural and economic (see Chapter 2).

NUTRITIONAL DEFICIENCIES MAY BE GREATER FOR WOMEN THAN FOR MEN

Reproduction and nutrition dominate women's special health concerns. These two concerns are logically inseparable, yet nutritional needs are lifelong, while reproductive needs other than nutrition are more time-bound. This discussion considers nutrition first.

Females are particularly affected by deficiencies in total energy, protein, iron, folic acid, calcium, vitamin A, and iodine. Deficiencies in such other nutrients as thiamine, niacin, and zinc are less universal but may be serious in defined areas. While sex-specific data are scarce, deficiencies are often greater for females than for males. Deficiencies are usually most obvious during early childhood, pregnancy, and lactation, but many problems are lifelong.

Women and girls commonly eat less than men and boys

Both in absolute terms and in relation to recommended daily allowances, women and girls consume less than men and boys (005, p. 23). The common belief that women expend less energy and therefore need to consume less is rarely true in developing countries (although women do need less energy to the extent that they are smaller than men).* One study in the Philippines found that men consumed 101 to 116 percent of their recommended daily intake of energy and protein, while women consumed 79 to 87 percent. Deficiencies are usually greatest in the poorest economic class and during periods of severe economic hardship. Preferential feeding of boys is associated with higher female than male death rates under age five in some countries (see mortality-morbidity section at the end of this chapter).

Women commonly eat less during pregnancy than they should, especially during the third trimester when weight gain should be greatest. There is a common but erroneous belief (even among some physicians) that weight gain in normal women should be restricted to make delivery easier. In fact, according to the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) (130), women should eat 150 calories per day more than usual during the first trimester of pregnancy and 350 additional in the second and third trimesters. They should, over the nine-month period, gain 10 to 12 kilograms. One study in rural Zaire found that women there gained only 2 to 3 kilograms during pregnancy. Another in India (106) found that pregnant women ate only 58 percent of their estimated requirements. Restricted weight gain, especially in already undernourished women, harms the mother and leads to high-risk, low birth-weight infants.

Breastfeeding imposes serious nutritional demands on mothers, actually higher than those during pregnancy. FAO and WHO estimate that a well-nourished breastfeeding woman needs 550 calories more per day than she would if not breastfeeding. This estimate assumes that she gained adequate weight during pregnancy. While eating these extra calories, a lactating woman will, nevertheless, lose about 4 kilograms of deposited nutritional reserves. Those who eat less will further degrade their own nutritional status (217, p. 7). It is important to note that women give up their own reserves in favor of the breastfeeding child, although children are eventually affected if the mother is severely malnourished. Mothers' health is likely to be further jeopardized by early resumption of heavy labor (including carrying water and fieldwork). Maternal depletion syndrome, due to numerous and closely-spaced pregnancies and undernutrition, is common.

Women lose iron continuously from puberty to menopause

Iron is needed to replace that lost in menstrual bleeding and to develop blood for growing fetuses during pregnancy. Women need a regular dietary intake of iron at three times the levels for men. Requirements are even higher for pregnant women and for women using intrauterine contraceptive devices.*

Shortage of iron leads to anemia, which affects approximately half of all reproductive age women and two-thirds of pregnant women in developing countries. Anemia is a serious debilitating condition which usually, however, becomes life threatening only during childbirth. Causes include:

- insufficiency or low bio-availability of iron in the diet, particularly where little red meat is eaten,
- blood loss due to infestation with parasites, especially malaria, hookworm, and schistosomiasis,
- increased requirements for fetal growth, and
- depleted iron stores because of frequent pregnancies.

*Recommended daily calorie and nutrient allowances are notoriously unreliable as guides for individuals or even whole countries. As one source (059, p. 173) notes:

> A number of FAO/WHO expert committees have developed recommended dietary allowances for the essential nutrients for various groups, including women. The nutritional requirements recommended for women have been calculated taking as reference a Caucasian, healthy, and well-nourished woman who performs eight hours of general household work, light industrial work, or other moderately active work. In developing countries, however, the most "typical" woman will most often be an adolescent, who is not free from diseases and parasites, who is overworked, and who can expect to be either pregnant or breastfeeding throughout her reproductive period. Nutritional requirements will be different for this woman.

*Use of oral contraceptives, on the other hand, reduces menstrual blood loss, and hence the need for iron.

Anemias occur 2 to 3 times more frequently in nonpregnant women than in men and up to 20 times more frequently in pregnant women. It is perceived by those affected as general weakness, fatigue, breathlessness, and loss of appetite; and since these symptoms are common, and generally not incapacitating, sufferers are almost always identified through special screening tests (004) rather than by self-referral to a health worker or clinic. Anemia seriously weakens women's productive capacity—by up to 20 percent according to one Indonesian study—as well as their resistance to disease. Severe anemia during pregnancy is associated with a high incidence of premature births, postpartum infection, and strokes. At childbirth, anemia may raise the risk of maternal death by 500 percent and of infant death by 600 percent, according to one study in Malaysia (311, p. 2).

Mothers under 18 years of age run high health risks. ICEF 8162/ Supachai.

Women need adequate calcium, vitamin A, and iodine--especially during pregnancy

Calcium is essential for bone formation, especially during childhood and pregnancy. Among women, shortage of calcium in childhood leads to small pelvic structure and difficult childbirth. Women are also more susceptible than men to calcium loss in old age (after menopause), leading to frequent fractures and a condition called osteoporosis.

As carotene is the main source of vitamin A for mothers, vegetable consumption habits and seasonal availability are crucial. Recent studies show that vitamin A deficiency not only results in xerophthalmia and ocular problems but also is related to increased morbidity and mortality in children (313). Night blindness due to lack of vitamin A is very common among pregnant women in some areas.

Women need more iodine than men, both for their own health and for that of their children. Iodine deficiency results in goitre, which is disfiguring and uncomfortable. Deficiency during pregnancy leads to cretinism and deaf mutism among offspring, and to other important but less noticeable cases of retardation and defective physical development. These problems occur especially in areas where the iodine content of the soil, water, and plants is low, and where foods from outside the area are not consumed.

HALF A MILLION WOMEN DIE EACH YEAR FROM PREGNANCY-RELATED CAUSES

Pregnancy and its sequelae are among the five leading causes of death for women aged 15 to 44. WHO (414, p. 5) estimates that 500,000 women die each year from causes related to pregnancy. Seventy-five percent of these deaths are due to such preventable causes as hemorrhage, severe anemia, sepsis, obstructed labor, and toxemia (291). Maternal mortality rates in some less developed countries are 50 times those in developed countries. These rates are per birth, moreover, and since women in developing countries have higher birth rates, their lifetime risk of maternity-related death is 150 to 300 times the risk of developed-country women. Appropriate birth planning, maternity care, and follow-up are principal factors in child survival and health status. Chart 1, drawn from a larger work on this topic (004, pp. 5–8), summarizes pregnancy-related problems.

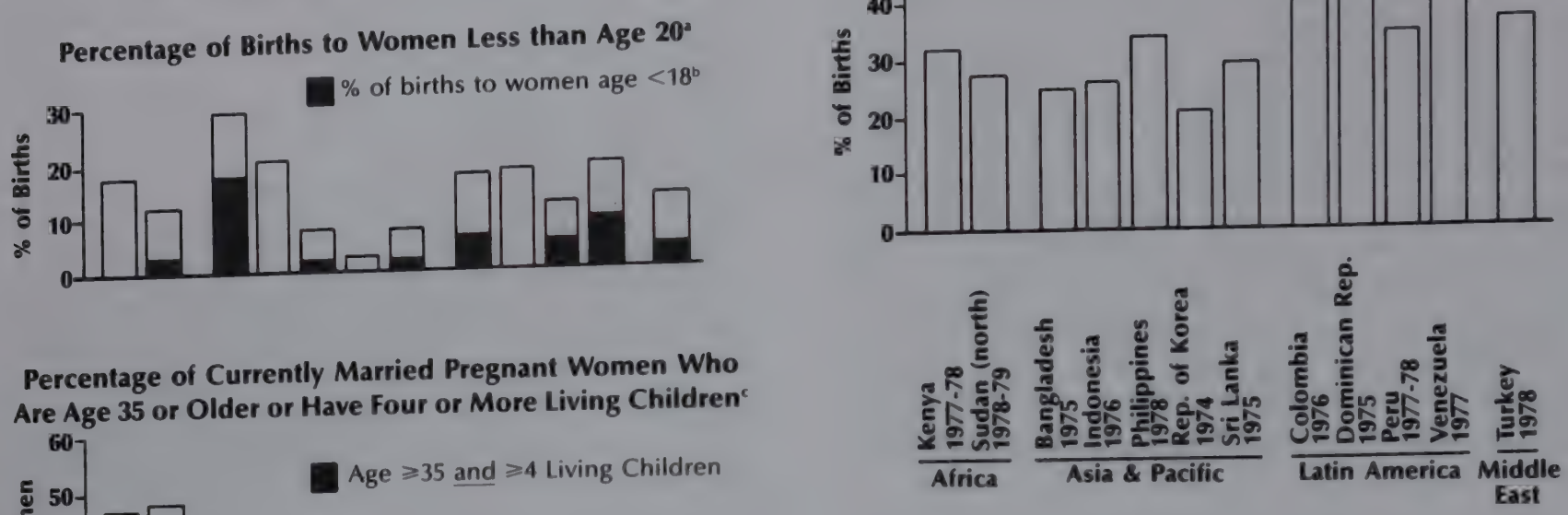
Mistimed and too frequent pregnancy is an important cause of maternal and infant mortality

All childbearing brings some risks, but risks are greatest for pregnancies that are:

- too closely spaced (less than two years apart),
- too early (mothers under age 18),
- too late (mothers over 35), and
- too numerous (parity over four).

According to one analysis (287), approximately half of all pregnancies in developing countries fall into one of these categories (see Figure 1). Many births fall into two or more risk categories at once, heightening the dangers for both mothers and children.

Figure 1: HIGH-RISK BIRTHS AS A PERCENTAGE OF ALL BIRTHS IN SELECTED COUNTRIES, 1974–1979



Note: Women over 44 not included in Venezuela

[a]Based on births to all women surveyed in last full calendar year before survey
[b]Percentage of births to women under age 18 not available for Kenya, Indonesia, and South Korea
[c]Colombia: based on women ever in union
[d]Based on most recent births to ever-married women surveyed
[e]Venezuela: intervals ≤24 months

Source: 287, p.J-664

Chart 1: MATERNAL HEALTH PROBLEMS

Maternal Health Problems	*Results*	*Prevalence*
Complications of childbirth: infections, eclampsia (convulsions), slow labor, malpresentation, multiple pregnancy, retained placenta, pre-eclamptic toxemia, ruptured uterus, placenta previa, etc.	• Many complications can lead to maternal and/or infant death	• Complications arise in perhaps 10–20 percent of deliveries
Hypertensive disorders of pregnancy (e.g., toxemia, high blood pressure)	• Highly correlated with birth complications • Associated with fetal deaths and low birthweight babies • Edema (swelling) and other symptoms cause discomfort	• Affects over 20 percent of pregnant women in developing countries
Maternal malnutrition	• For mother, leads to fatigue and weakness and may lead to susceptibility to infections, insufficient lactation, and maternal mortality	• Affects the majority of women in many poor areas to some degree
Anemia (mostly iron deficiency)	• Causes fatigue and weakness • If severe, can predispose maternal death during childbirth from heavy bleeding or heart failure	• Affects an estimated 65% of pregnant women and 50% of nonpregnant women in developing countries

Maternal Health Problems	*Results*	*Prevalence*
Complications of abortions	• Maternal death in many cases	• Cause of 30–50% of maternal deaths in Latin America; significant cause in other areas
Ectopic pregnancy	• Without surgery and blood transfusions, leads to maternal death	• This is an important cause of maternal deaths worldwide • It is 6–10 times more prevalent in women who have had pelvic inflammatory disease (PID)
Sequelae of female circumsion	• Scar tissue may lead to obstructed labor and maternal and infant death	• This is a significant problem where female circumcision is prevalent
Malaria	• Fevers, chills, aches for mother • May lead to maternal death • May lead to miscarriages and stillbirths	• Malaria remains widespread in many tropical areas
Goitre	• Besides discomfort to the mother, frequently leads to birth of children with severe abnormalities (cretinism and deaf-mutism)	• Estimated 25 million cases worldwide • Very prevalent in specific localities, especially in the mountains
Diabetes	• Can lead to maternal death • Infants born to diabetic mothers have an increased risk of congenital malformations and other problems • Many chronic diseases, including diabetes, renal disease, and hypertension are aggravated by pregnancy	• Varies greatly • Many diabetics in developing countries die before reaching childbearing age
Discomforts of pregnancy such as nausea, fatigue, and swelling	• Varying discomfort among pregnant women	• Affects many pregnant women to some degree
Sexually transmitted diseases (STDs)	• Gonorrhea can lead to infertility and concomitant psychological problems for women, especially where their childbearing role is highly valued • Increased risk of cervical cancer, ectopic pregnancy, and PID • For fetus or infant, gonorrhea can lead to blindness, syphilis to spontaneous abortions, stillbirths, perinatal deaths, deformations, etc.	• Infertility rates vary greatly; they are very high in parts of Africa but are mostly due to postpartum and postabortion infections rather than STDs • STD prevalence unknown but of great concern in some areas; rates appear to be increasing worldwide
Low birth-weight babies	• These babies have very high rates of infant morbidity and mortality	• Varies substantially; quite common among poor mothers in developing countries
Neonatal tetanus	• Almost all babies who contract tetanus die, particularly without immediate, sophisticated care	• Varies depending on immunization coverage and on birth practices (e.g., packing the umbilical stump) • Important cause of neonatal mortality in some areas

Source: 004, pp. 5–8.

In Third World countries, girls under the age of 18, and particularly those under the age of 16, are unlikely to have finished their growth. If they become pregnant, the chances are that their own growth will be stunted or that their incomplete growth will have an influence on the child. Maternal mortality rates for girls under 16 may be two to four times those for older teenagers (287, p. J-673).

When births are close together, the blood nutrient levels and general biological resources of the mother are not restored adequately before she gives birth to the next child. This makes these mothers a serious risk group, and their children are more likely to have early childhood complications and difficulties than children who are spaced at intervals beyond two years. In countries where the nutritional status is marginal, a pregnancy may tilt the balance and move the woman into an overt state of malnutrition. Moreover, the greater the number of children a woman has, the more likely it is that she will suffer complications of pregnancy (toxemia, hemorrhage, and infections) or develop diabetes, cervical cancer, rheumatoid arthritis, hypertension, and chronic ill health (306).

Male and female infertility are both problems for women

Inability to bear children is often a special problem for women, especially in parts of Western and Central Africa. Three forms of inadequate fecundity may have serious social and, eventually, health consequences for women, namely:

- inability to bear any children,
- inability to bear additional children, or
- failure to produce a son.

These problems are usually blamed on women, even though about 60 percent of sterility cases worldwide are due either to the male partner alone or to both the male and female. Failure to produce a son, moreover, can only be caused by men (because it is the male chromosome that determines the child's sex). Consequences of sub-fecundity may include divorce and domestic violence.

Causes of infertility are not well understood (074), although sexually transmitted diseases and resultant pelvic inflammatory disease (see separate discussion below) are often responsible. Other possible causes for some women include malaria, schistosomiasis, trypanosomiasis, pelvic tuberculosis, and filariasis. Infections caused by circumcision, unsafe abortions, and childbirth may also contribute.

*Women lose acquired immunity to malaria during pregnancy, although they generally recover it by the time of delivery (063).

Tubal pregnancy and miscarriage sometimes occur

Two possible complications are of particular concern during the early months of pregnancy. One is implantation of the fetus outside the uterus. Ectopic pregnancy, as this condition is known, inevitably leads to rupture and possibly severe hemorrhage. It can also damage the birth tubes and complicate future pregnancies. The other condition is spontaneous abortion (frequently termed miscarriage) which may cause hemorrhage, retained pregnancy tissue, and infection. Services should be available to remove the remaining tissue (with suction or curettage) and to provide antibiotics. Infection frequently accompanies retained tissue since it provides the ideal ground for bacterial growth.

Heavy labor and poor nutrition before childbirth adversely affect outcomes

Women's health and nutritional status during pregnancy greatly affects outcomes for both mothers and babies. Conditions that may not be critical at other times—anemia, malaria,* fatigue, and low energy intake, for example—are likely to become critical for both the mother and the unborn child.

The most important prenatal practices are those relating to food and heavy labor. As noted above, many families restrict consumption of high protein and energy foods just at the time when they should be increasing them. Many women continue heavy labor until delivery day (015, p. 9) even though this frequently harms both mother and child (064). Toxemia, eclampsia, and other hypertensive disorders of pregnancy contribute to about 20 percent of maternal deaths in developing countries.

Major problems of childbirth itself include infection, hemorrhage, tetanus, toxemia, and various problems with the positioning of the fetus and the speed of delivery. Prior circumcision, especially extreme forms (see below), can greatly complicate delivery. Worldwide, only about 60 percent of births are assisted by trained attendants.

Induced abortion causes many maternal deaths

In almost every country, a substantial number of pregnancies are deliberately aborted, leading to an estimated world total of 35 to 55 million induced abortions per year.** Surveys in Latin America and Asia suggest that as many as one of every three or four reproductive-age women may have had an induced abortion. In Seoul, Korea, in the late 1970s, there were an estimated 2.75

**Data on induced abortion are extremely unreliable, due to the clandestine nature of many operations. *Induced Abortion: A World Review, 1983*, published by the Population Council, is generally considered the best statistical source.

abortions for every live birth, while rates in Africa and the Middle East, though lower, are increasing.

Outside Africa, those experiencing abortion are most often older, married, urban women wishing to limit total family size (although rates among young urban migrants are increasing). In Africa, those involved are usually younger women attempting to end a non-marital pregnancy (208).

The health effects of induced abortion, when performed in unsafe conditions, can be serious and may consume a major portion of governmental maternal health care resources. Hemorrhage, infection, and shock are the most common effects, followed by cervical lacerations, uterine and intestinal perforations, and poisoning from ingesting caustic agents. Mortality from unsafe abortion can be as high as one per 100 procedures, though rates of one per 1,000 are more common. WHO has estimated that 200,000 women die each year from induced abortion (414, p. 7). A third to a half of maternal mortality may be due to unsafe abortion in some countries. As much as 50 percent of some maternity hospital budgets are spent on abortion complications. By contrast, mortality rates for medically safe abortions conducted in the first trimester are only slightly above one per 100,000, that is, a thousand times less than the first rate cited above.

HEALTH EFFECTS OF FEMALE CIRCUMCISION CAN BE SERIOUS AND LASTING

Forms of female circumcision, which is common in Africa and the Middle East, range from the relatively mild "sunna," to clitoridectomy, to a severe form known as "infibulation" or "pharaonic circumcision." Health effects can be serious and lasting and are usually much greater for girls than the consequences for boys of male circumcision. Too often the instruments, infibulating thread or thorns, and traditional wound dressing (ash, cowdung, salt) are unsterile, and sometimes the young girl's struggles lead to additional harm to adjacent organs. Immediate effects include shock, severe pain, bleeding, infection, urine retention, and accidental damage to surrounding organs. Longer-term effects, especially from infibulation, include scarring, obstructed menstrual flow, painful intercourse, and obstetric complications. Deaths from bleeding or infection occur even in women with simple circumcision or excision. Complications are greatest with infibulation because of the degree of mutilation and the high risk of bleeding and infection (052).

VIOLENCE AGAINST GIRLS AND WOMEN IS A PROBLEM IN MANY COUNTRIES

While largely unquantified, violence against girls and women is clearly a problem in many countries, both at home and in the community. Examples include:

- deliberate or semi-deliberate female infanticide,
- domestic violence,
- sacrifice or banishment of widows,
- punishment of adulterers,*
- "dowry killings," and
- rape and incest.

In Egypt, Bangladesh, and elsewhere, raped women may be banished or even murdered in order to save family honor. Such well publicized acts of violence as dowry killings and female infanticide occur less frequently than quiet day-to-day discrimination against females within the family.

Box 2: HEALTH CONDITIONS THAT PARTICULARLY AFFECT WOMEN

—Malnutrition (particularly deficiencies of protein, energy, and iron)
—Maternity
—Family violence
—Sexually transmitted diseases
—Occupational hazards
—Cervical and breast cancer

WOMEN MAY SUFFER MORE SEVERE MENTAL HEALTH PROBLEMS THAN MEN

Both men and women suffer mental health problems serious enough to threaten economic livelihoods and the safety and health of children. Men's problems in some countries may be more easily recognized than women's because they result in alcoholism or other disorders while women often suffer stress in silence. There is some evidence of greater mental illness among women, however, due to severely conflicting family and cultural expectations and the trauma of overwork and repeated childbearing. Female alcoholism and even suicide are visible symptoms in some areas. In Bangladesh, women outnumber men among the mentally ill by two to one, and the suicide rate for women is three times the male rate. An inquiry into high suicide rates among 15 to 30-year old women in India blamed childhood marriages and the stress caused when girls leave home to live in their husband's house (113, p. 9). A Ghanaian study noted that incidence rates for mental illness were especially high among urban dwellers, working women, and those without husbands (305). Stress weakens women's resistance to physical disease and may reduce their capacity for essential economic and family activities. This problem has not been adequately documented, partly because stress is difficult to define and to measure.

*Almost always more severe for women than for men.

SEXUALLY TRANSMITTED DISEASES MAY BE MORE SERIOUS AND DIFFICULT TO DIAGNOSE IN WOMEN

Common sexually transmitted diseases (STDs) include gonorrhea and syphilis. While prevalence rates for men and women are similar, women suffer greater physical and social consequences because STDs often lead to pelvic inflammatory disease (PID) and thence to sterility (that is, the inability to bear children). Diagnosis of STDs is harder for women than for men, both because symptoms are less obvious and because women usually suffer greater disapproval (and thus avoid clinics). Outward signs include genital sores or ulcers, pain, and a milky vaginal discharge, yet they often disappear while the disease becomes more serious. Treatment delay makes PID more likely, and this, although it heals spontaneously, leads in turn to scarring of birth tubes and thence to sterility or ectopic pregnancy. STDs, when they don't cause sterility, can threaten infants during pregnancy and childbirth. Thirty percent of infants born to gonorrhea-infected mothers become blind.

In the growing cities of Latin America and elsewhere, drug addiction and prostitution are increasing among teenage female immigrants from rural areas. Adolescent pregnancy is also common. These problems frequently result from underlying psychosocial conditions.

WOMEN ARE INCREASINGLY EXPOSED TO OCCUPATIONAL HEALTH AND SAFETY HAZARDS

Both women and men in developing countries are increasingly exposed to hazardous chemicals, dust, inadequate lighting, and other side effects of agriculture and industrial development. Pesticides and fungicides used in agricultural production cause cancer, miscarriages, and birth defects. Exposure to pollutants in the first trimester of pregnancy, and heavy labor in the third, may cause congenital malformations and low birth-weight. Pollutants may also pass to infants through mothers' milk. The low-cost clothing, computer chips, toys, and other products imported by developed countries often come from Asian "sweat-shops" staffed by women. According to recent studies:

> Some work hazards are likely to affect women more than men. Byssinosis, for instance, is an incurable lung disease caused by inhaling cotton fibres and thought to afflict one quarter of India's textile workers, who are predominantly women. Pesticide poisonings may affect women more since their agricultural work tends to bring them into closer contact with the crop. And in the electronics factories of South-east Asia 25 year-old workers are called "grannies" by their younger colleagues because they have to wear glasses after damaging their eyes peering through microscopes for hour after hour assembling tiny silicon circuits (014, p. 13).

Women may also be more affected than men because they tend to work in the poorest paying jobs and to be less organized than men to protect themselves. Those

Many women continue heavy labor until just before childbirth and return to work immediately afterward. WFP/FAO/Fincher.

occupational health standards that are in force in developing countries usually apply mainly to larger formal sector businesses and not to the informal sector where many women work. Working women usually have greater home responsibilities than their husbands and, therefore, suffer greater fatigue and stress.

CERVICAL AND BREAST CANCERS MAY BE MORE WIDESPREAD THAN THOUGHT

Cervical and breast cancer have been increasingly recognized as causes of death not just in developed countries but also in middle-income developing areas, such as Latin America. Cervical cancer reportedly accounts for 30,000 or more deaths per year in Latin America (283), where mortality rates due to this condition are four times higher than in developed countries, twenty percent of cancer cases in India, and 25 percent of cancer deaths in Latin America. Rates of death from cervical cancer in Latin America as a whole are four times higher than those in developed countries. It appears likely that more cases of cervical cancer will be recognized in less developed countries as women live longer and diagnostic facilities improve.

Indicators of high-risk factors associated with cervical cancer include:

- poverty,
- low coverage of health services,
- early sexual initiation,
- exposure to multiple partners,
- poor personal hygiene,
- promiscuity of male partners,
- frequent genital infections, and
- poor obstetrical care.

Recent evidence (311) particularly stresses the role of male promiscuity in heightening the risk for specific women.

Breast cancer afflicts women worldwide and is one of the major causes of death in developed countries. Accurate data are not available for most developing countries because of the lack of diagnostic and treatment facilities. Specific risk factors include:

- breast cancer in mother or a sister,
- young age at first pregnancy,
- high fat consumption, and
- exposure to radiation on hair, neck, or thorax.

Smoking, also related to several forms of cancer (as well as other conditions), is increasingly prevalent among women.

OLDER WOMEN HAVE SPECIAL HEALTH NEEDS

Women's special health needs do not end with childbearing. The threat of cervical and breast cancers continues past age 45, and diabetes (especially in Latin America) becomes an important mortality factor. Gynecological problems continue at and after menopause. Loss of calcium causes osteoporosis, a condition in which bones become brittle and women may lose an inch or more of stature. Influenza and pneumonia are major killers of women above age 65. Problems of older women and men have not been adequately recognized in primary health care.

Older women have special health needs. ICEF 8857/Black.

MORBIDITY AND MORTALITY DIFFERENTIALS INDICATE WOMEN'S HEALTH STATUS

Women in most countries live longer than men, and, even before birth, female fetuses have higher survival chances than male fetuses. (The latter result is from developed countries and for the last trimester only.) The consistency of this evidence suggests that females are genetically stronger than males and that they should generally have lower age-specific mortality rates.

There are a number of countries and sub-national regions where this is not the case, however—where girls and women have higher death rates than boys and men. Reversal of the usual differentials means that special factors are operating against females: those most often mentioned are malnutrition and lack of access to health care during childhood and the reproductive years (both discussed in the next chapter). Higher female

death rates in at least some countries can be seen in three measures: life expectancy, the sex ratio (the ratio between female and male populations), and age-specific mortality rates. Deviations from the usual pattern are greatest in South Asia (India, Pakistan, and Bangladesh) and parts of the Middle East. Here are some examples:

• In India, female infant and child death rates exceed male rates in the north and west (though not elsewhere) (121). In the country as a whole, 23 percent of girls and only 19 percent of boys (a ratio of 1.19 to 1.0) die before age 5. In all age groups combined, there are only 935 females for every 1,000 males (089, p. 24).

• In Egypt around 1975, 18.2 percent of girls and 15.8 percent of boys (a ratio of 1.15) died before age 5. Similar ratios at slightly different mortality levels were reported from Iran (1.14) and Pakistan (1.13).

• One study in rural Bangladesh (117) found differentials favoring males at all ages except birth to one month (when girls' biological advantage is evident) and 45 to 64; girls' probability of dying was 46 percent higher than boys' at ages 1 to 4, and 37 percent higher between 5 and 14.

These data are cited for their *atypicality*, not their representativeness, yet they do indicate intense problems in certain areas.

In general, females are at greatest risk relative to males between ages one month and five years and between 15 and 45. As overall mortality levels fall, female mortality rates generally fall faster than male rates, so that differentials favoring males gradually disappear (230). The one-to-four age group is usually the last to favor females. Birth rates, and the quality and accessibility of health services, largely determine women's risk of death during pregnancy.

Box 3: INDICATORS OF WOMEN'S HEALTH STATUS

—Life expectancy
—Age-specific mortality rates
—Maternal mortality rates
—Contraceptive prevalence rates
—Non-therapeutic abortion rates
—Birth rates for women under 18 or over 35
—Proportion of births occurring within two years of a prior birth
—Proportion of pregnant women receiving prenatal care (however defined)
—Proportion of babies weighing under 2500 grams at birth
—Proportion of births attended by trained personnel
—Neonatal mortality rate
—Literacy rate
—Anemia prevalence rate
—Average weight gain in pregnancy
—Proportion of teenage women who are married

Two other important indicators of women's health status are the proportion of babies who weigh less than 2.5 kilograms at birth and the proportion who die during the first month of life (the neonatal mortality rate). Both measures are largely attributable to maternal nutrition, while the neonatal mortality rate also reflects antenatal care and conditions at the time of delivery.

In many countries, boys are fed better than girls. These are two-year-old twins; the boy is on the right. WHO/UNICEF 19550.

CHAPTER 2

Sociocultural and Economic Factors Affecting Women's Health

Women in many countries are considered less important than men for economic development and for survival of the family line. In many societies, baby boys are preferred to baby girls because boys will eventually increase the family through marriage and their wives' childbearing, while girls will move away to someone else's family. Boys are also more likely in many places to support their parents during old age. According to one analysis (234, p. 203), "the most powerful variable in explaining cross-national sex mortality differentials . . . is an index of the status of women." The status of women has profound effects on their own health and the health of baby girls.

> In China, sons traditionally are prized for passing on the family name, a Confucian legacy enshrined in the saying: "There is no behavior more unfilial than to have no male descendants". . . . Daughters, by custom, move in with their husband's parents after marriage and are known colloquially as "goods on which one loses. . . ." Even though the male chromosomes determine the sex of a child, women absorb the blame if the baby is female. They often pay a price of beatings, scorn by their own family and divorce. The pressure reportedly has driven some wives to suicide, others into mental institutions . . . (370, 1985).

Signs of females' low status include:

- preferential feeding of males (longer breastfeeding, earlier supplementation, and more preferred food later),
- neglect of women's nutritional needs, especially (but not solely) during pregnancy and breastfeeding,
- more timely and professional health care for males, and
- outright abuse, violence, and sometimes even female infanticide.

When food is scarce, women and girls often suffer, especially in places where they eat after men. A survey in India by the National Committee on the Status of Women found that women in 48.5 percent of households ate after men. A study in the Punjab shows that boys are breastfed longer and given more food after weaning than are girls (126). Another in Pakistan (209) showed that 60 percent of grandmothers left in charge of grandchildren fed only the boys and not the girls. Birth intervals were shorter after girls than boys, either because of reduced breastfeeding or because of a conscious desire to have a son. Practices like these lead to widely reported sex differentials in nutritional status.

- In one Indian study, for example, 20.3 percent of girls were found to be severely malnourished, compared to 9.1 percent of boys (085).
- In Matlab, Bangladesh, 14.4 percent of girls were found to be severely malnourished, compared to 5.1 percent of boys.
- A 1968-1974 survey in Colombia found that 65 percent of girls were malnourished, compared to 48 percent of boys (257).
- A study in Botswana also found girls more likely than boys to be malnourished (014, p. 13).

Son preference also contributes to differential use of health services. In Matlab, Bangladesh, for example, diarrhea treatment rates for boys up to age 14 were 66 percent higher than for girls. A study in a rural area of India found that treatment, when sought, was delayed more than 24 hours for 44 percent of girls but for only 23 percent of boys (414, p. 5). In Korea, the introduction of a minimal fee for immunization caused a drop in female coverage (369, p. 206). In Bolivia, on the other hand, one study (138, pp. 56–57) found that sick boys received less care than sick girls, possibly because they could not be spared from fieldwork.

WOMEN ARE THE SOLE BREADWINNERS IN MANY FAMILIES

The status of women is universally denigrated by the practice of counting men as heads of household regardless of who earns more money, is better educated, or actually makes family decisions. Statistical concepts like this, originally designed to simplify data collection, often take on a life of their own and dominate policymaking. Development agencies direct activities to men because they are "heads of family," while employers justify lower wages for women on the grounds that they are secondary earners.

Even with this built-in bias, innumerable surveys and censuses show large and increasing numbers of families headed by women. Female family heads are of several divergent types:

- young never-married mothers with small children, usually living in cities,
- slightly older, often rural, married women, whose husbands have gone to work in cities or mines,
- widows, some still with small children, and
- divorced and separated women.

Box 4: INDICATORS OF WOMEN'S RELATIVE SOCIAL STATUS

Measure	*Standard of Equality*
Literacy rate	Should be the same for men and women
Proportion of children in school	Should be the same for boys and girls
Life expectancy	Should be several years longer for women
Postneonatal and child mortality rates	Should be slightly higher for boys
Immunization coverage	Should be the same for boys and girls
Proportion of children below standard weight for age	Should be the same for boys and girls
Proportion of clinic patients who are female	Should be above 50 percent

The needs of the female family heads listed above are likely to differ. Some of these women receive partial support from absent male partners or from other family members, but many are totally on their own.

Estimates of female family headship worldwide range from 18 percent (071) to 30 percent, with great differences among countries and sub-national regions. Proportions may be as high as 80 percent among some subnational groups. The numbers may be increasing worldwide because of drought and overcrowding of land, because of new economic opportunities in cities, oil-producing countries, and elsewhere, and because of increasing social fragmentation. Women, because of their marginal economic and social positions, are often affected adversely.

WOMEN'S ROLE IN FAMILY DECISION-MAKING AFFECTS PERSONAL AND FAMILY HEALTH

One of the most important things to learn about women is what their status and influence is within the family. Of crucial importance is the distribution of routine family maintenance responsibilities (water and fuel supply, food preparation, childcare), and the allocation of family food and income (268). Health managers should also try to understand who makes family decisions regarding such subjects as:

- what foods to buy and cook,
- how to respond to childhood illness,
- whether and when to use contraceptives, and
- whether to adopt new health practices.

The degree of women's influence in household decision-making varies greatly from one social and ethnic group to another, and often it is greater than superficial analysis suggests. In Islamic societies, for example, women may be able to determine many important family matters as long as they do not openly assert responsibility outside the home. Even within an individual family, influence may be affected by a woman's age, number of children (especially sons), education, and personal income. Older women, especially those with daughters-in-law in the household, may have great influence. This may mean that they, rather than mothers and fathers, make the major decisions about new health behaviors. In Bangladesh, for example, mothers-in-law reportedly decide about the younger generation's health and childcare (018).

It is generally believed that educated women and those with personal income have greater influence in family decision-making and resource allocation. Education raises women's status and knowledge of the world and may increase individual self-confidence. Whether these augment women's intrafamily influence, however, may depend on the husband's status. In parts of Africa, women retain their own income and bear sole responsibility for providing parts of the family meal. In some other places, though, even women who earn their own income must give it to their husbands and relinquish influence over its use. In brief, the roles of female education and income are locally determined.

WOMEN WORK FROM DAWN TIL DUSK

It is important that managers understand how women use their time, because both the pattern of activities and the total burden of responsibilities have great effects on health. Women's total work burdens are important for a number of reasons:

- they affect women's protein and energy requirements,
- they restrict availability for health activities, and
- along with childbearing, they contribute to women's overall weakness and susceptibility to disease.

The pattern of activities, moreover, affects:

- women's exposure to environmental and occupational health hazards,
- women's ability to breastfeed, prepare weaning foods, and otherwise care for their children,

- women's clinic attendance, and that of their children, and
- women's ability to generate income for improved family welfare.

Women work long days and evenings at such routine tasks as fieldwork, grain processing, food preparation and storage, fetching of water and firewood, trade, wage employment, and childcare. Young girls also have heavy family responsibilities that interfere with education and other activities related to future health status. While men may sometimes work more intensively for short periods, women generally work longer with greater overall energy use.

Women use personal income for family welfare

In many places women have been found to use personal income for family welfare—especially food and health care for children—whereas men use more of theirs for status goods and entertainment (268; 120). Much of women's work is not compensated, and even when it is, women may have little say regarding how it is used. The common belief that female unemployment is less of a problem than male unemployment is usually the reverse of reality.

Inadequate childcare affects both mothers and children

Women may earn income without requiring childcare, or they may require childcare without earning independent income (for work in family fields, for example). Childcare needs may also be seasonal because of fluctuations in agricultural or other labor markets.

Mothers are affected by inadequate childcare because it inhibits their ability to work outside the home and to take advantage of adult education and other opportunities. This in turn limits women's ability to support their families. Children may be affected directly as well by inadequate breastfeeding and weaning and by slow response to childhood illnesses.

Women have developed a variety of coping mechanisms for childcare, such as:

- taking two part-time jobs and breastfeeding in between,
- moving in with a sister or mother,
- sending children to relatives, or bringing grandparents into the home,
- paying one mother to care for children while other mothers work outside,
- establishing formal daycare centers,
- finding farm or trade jobs that allow breastfeeding, and
- keeping older daughters home to care for children.*

*This, of course, keeps daughters out of school and is thus not a desirable solution.

Box 5: SOCIOECONOMIC FACTORS AFFECTING WOMEN'S HEALTH

—Women's total workload
—The nature of women's activities, especially:
  - exposure to water-related diseases
  - exposure to pesticides and industrial pollutants
—Degree of respect/status accorded to women
—Women's personal incomes
—Women's educational level, especially relative to that of their husbands
—Women's access to health services
—Degree of women's influence in family decision-making and food and resource allocation
—Presence of male partner; if he is not, degree of support that he provides
—Age at first childbirth
—Childspacing
—Total childbearing
—Availability of food of adequate quantity and quality
—Access to health facilities
—Degree to which women participate in planning, managing, and evaluating health and other development activities

While many women turn first to adult family members and older siblings as child minders because such care is free and convenient, family members frequently do not provide the same quality of care that the mother herself would give. Additionally, use of older siblings, most frequently girls, affects their educational opportunities. In a Philippine study, Popkin (270) reported that the use of older siblings as maternal substitutes resulted in a net negative effect on the nutritional status of the children being minded. In many countries, young girls of ages 8 to 12 are hired as child caretakers. In a survey of low-income women in Brazil, it was found that malnutrition was most prevalent among children left at home alone or with a sibling.

Most women who work have to do so for family survival, and health authorities should try to work with this reality. Even short breaks from some jobs can hurt women's chances for future employment. Studies do show that children of working mothers are often less healthy than those of women who stay at home, but this is largely because the poorest women are the ones most obliged to work. Moreover, women who take their infants along for agricultural work may expose them to hot sun, insects, and snakes.

Mothers' separation from children undoubtedly complicates breastfeeding, but according to Carloni (001, p. 11), "There is no evidence that working mothers in developing countries are more likely to bottle

feed, reduce the duration of breastfeeding or wean children earlier." Working mothers also appear to spend about the same amount of time on childcare as nonworkers, taking the additional time from their own leisure.

In spite of the overall correlation between women's work and poor child health, children in these families are almost certainly better off than they would be if their mothers didn't work.

The Overseas Educational Fund of the League of Women Voters has published a survey of childcare needs and resources in six developing countries (see the Annotated Bibliography in Appendix A). The World Health Organization has also developed a framework for country-level studies on this topic.

Women are active in agriculture nearly worldwide

Women nearly everywhere participate in preparation of fields, sowing of seeds, irrigation, weeding, harvesting, husking, grinding, sifting, sales, and other tasks. In many countries they dominate agriculture.

> In the Third World where subsistence agriculture is the norm, women are not the farmers' wives—they are the farmers. . . . According to the U.N. Economic Commission for Africa, African women farmers put in 60 to 80 percent of the agricultural fieldwork, working more than 16 hours a day during planting season. In much of sub-Saharan Africa, the male contribution to food production is limited to clearing the land, hunting and minimal crop cultivation and supervision of livestock. Women, often plural wives of one man, are expected to raise the crops that not only feed the family, but also provide cash for the male who holds legal or traditional rights to the land (382, pp. 5–6).

Rural Latin American women are also very active. Fieldwork, besides taking great time, exposes women (and their babies) to pesticides, hookworm, and other health hazards.

Women prepare family meals

Key functions often or always performed by women include:

- purchase of family foods,
- preparation of family foods,
- infant feeding,
- weaning,
- food storage, and
- disposal of garbage.

The most important of these for child survival are breastfeeding and weaning (145).

Women almost everywhere prepare the family meals, although apparently there are some exceptions even to this generalization. Women may or may not do the family food shopping. In northeast Brazil, Bangladesh, and parts of India, shopping is very often a male responsibility, while in rural Colombia and elsewhere women sometimes pool shopping duties to reduce time requirements. In parts of sub-Saharan Africa, men are expected to provide grain for the family meal, while women are expected to provide sauce ingredients (001, p. 4). Who cooks and who buys must be known in order to target nutrition education efforts (004, 145).

Women largely determine the cleanliness of utensils and storage containers. Women active outside the home may prepare and store weaning foods in the morning which, especially during the hot season, become contaminated before consumption. There is evidence that contaminated foods, particularly weaning foods, may be the principal mechanism for transmitting organisms that cause diarrhea and dysentery. Women also prepare, serve, and sell street foods, primarily in cities but increasingly in rural areas as well.

Box 6: WOMEN'S ROUTINE ACTIVITIES THAT GREATLY AFFECT FAMILY HEALTH

—Provision of safe and abundant water
—Food production, preparation, serving, and storage
—Breastfeeding and weaning
—Routine childcare including home treatment of common problems such as diarrhea
—Cultivation and harvesting of food crops
—Income generation and wage employment

Women usually carry and store the family water supply

Women generally bear major responsibility for the quantity and quality of water used in the home as well as for household hygiene and refuse disposal. In many countries women walk great distances and wait long hours getting water. In the Sahel, women may leave home at dusk, sleep at the water sources, and return in the cooler morning hours. There is a joke in Senegal that wells are replacing contraceptive pills. In the mountains of Nepal, women may have to climb 1,000 meters down steep slopes to a river and then carry water back up, sometimes twice a day. Time and physical burdens due to water needs generally increase during dry seasons.

The task of obtaining water—carrying, queuing up, pulling a bucket, pumping—are exhausting as well as time-consuming. Physical burdens may damage a woman's spine and pelvis, aggravate a prolapsed uterus, and complicate childbirth. Women reportedly expend an average of 9 percent of their daily caloric intake in carrying water, and in hilly terrain up to 27 percent. For pregnant and lactating women, this is a significant drain on caloric reserves.

According to WHO estimates, 80 percent of all disease in the world is attributable to insufficient or poor quality water and sanitation. This includes the effects of drinking contaminated water, water acting as a breeding ground for the carriers of disease, and disease caused by lack of washing. In 1975, only about 20 percent of rural people in developing countries had reasonable access to adequate water and sanitation. Even in cities, only 50 percent had adequate sanitation facilities and 75 percent adequate water.

Women are in constant contact with contaminated water and thus particularly vulnerable to water-related diseases. These include:

- *Waterborne diseases* spread by drinking water contaminated by feces, by consuming food washed in contaminated water, and by washing hands, face or utensils in contaminated water. Examples include typhoid, cholera, dysentery, gastroenteritis (diarrhea), and infectious hepatitis.
- *Water-washed diseases* spread by insufficient use of water for personal hygiene. Skin diseases such as scabies, leprosy, and yaws, and eye diseases such as trachoma and conjunctivitis are examples.
- *Water-insect-related diseases* spread by insects that breed in water or bite near it. These include sleeping sickness, malaria, yellow fever, and river blindness.
- *Water-based diseases* carried by an invertebrate organism living in water which acts as the vector. Schistosomiasis and guinea worm are two examples.
- *Diseases from poor sanitation* spread by infectious agents in human excreta which lodge in soil or are washed into a water source. Diseases can be transmitted by consuming polluted water or food or by body contact. Some examples are roundworm, hookworm, and whipworm.

Women who go to the rivers to fetch water or wash clothes may be bitten by malaria-carrying mosquitoes, by blackflies spreading onchocerciasis, or by other flies spreading African trypanosomiasis.* Washing or agricultural work near or in water may lead to schistosomiasis. In drinking water from ponds while cultivating the fields, women may acquire dracunculiasis (guinea worm infection). These conditions affect men, too, of course, but in some places not as much.

Women are responsibile for family hygiene

Women are largely responsible for both the quantity of family water supply and the way in which it is used. Women buy or make soap for the household, clean the home, and care for household animals. It is generally women who teach children defecating behavior, handle

*American trypanosomiasis, on the other hand, is not related to water.

Collecting wood for fuel. World Bank/Hader.

infants' feces, and clean the latrines. Women also dispose of garbage and used water.

Women may, therefore, be agents of water contamination. Contamination often occurs after collection through improper handling on the way to or in the home. Women who care for young children have been shown to have increased numbers of pathogens on their hands, increasing the risk of disease transmission both to themselves and their families. The widespread perception that the excreta of children are "harmless" contributes to a continuous chain of infection and reinfection. In fact, the stools of infants and small children have greater numbers of microorganisms per unit of weight than do those of older children and adults. Women may be the victims as well as the causes of such transmissions.

Women collect firewood and other fuel

Women also spend major parts of their day looking for firewood or other fuel. In parts of Kenya, women reportedly spend 20 to 24 hours per week fetching firewood, while in Botswana they may walk as much as eight miles per day. The availability of fuel helps determine whether meals are served hot or cold, hence whether they are relatively free of or contaminated by bacteria. This is particularly critical for weaning foods. According to one report (137, p. E1), many families in the Sahel have had to reduce hot meals to one per day, while soybeans introduced for nutritional purposes have been rejected because they require too much cooking. The growing worldwide scarcity of firewood and other fuels is, of course, not just a woman's health problem, but women are the usual collectors and users and thus are particularly affected.

WOMEN ARE IMPORTANT USERS OF HEALTH CARE SERVICES

Even without primary health care, women are important as users of traditional and modern services, as caregivers within the home, and as health care providers. A paramount objective of new programs should be to enhance these roles.

Women's need for health care is usually greater than men's

Women should normally use health facilities more than men because of their poorer nutritional status and childbearing and childrearing responsibilities. In Kenya, 80 percent of clinic users are reportedly female (203, p. 75), while in Bolivia a 1977 survey (188) found sick women more likely to get help than sick men. In India on the other hand:

> Despite higher morbidity among females of all ages, treatment is sought more often for males, a higher percentage of ailing men than women get medical treatment and a higher proportion of services are offered to men. For example, a survey . . . in Maharashtra showed that a higher proportion of ailing boys (under 15) got treatment than girls. Adult women usually got no treatment or only traditional treatment or used home remedies while adult men availed of institutional health services. While more females suffer from malnutrition, hospital admission for malnourished males is higher. Females are brought to hospitals at later stages of a disease than males (089, p. 24).

Box 7: THE FACTS OF WOMEN'S LIVES THAT AFFECT CHILD HEALTH

—Maternal health, especially nutritional status
—Age at first childbirth
—Childspacing
—Total childbearing
—Maternal educational level
—Women's overall status (and hence the degree to which boys and girls are treated equally)
—Women's personal income
—Mothers' influence in family decision-making and food and resource allocation
—Nature and duration of activities outside the home
—Women's total workload, especially during pregnancy and lactation
—Mothers' access to health clinics
—Nature and availability of childcare support
—Whether or not children's father is present; if he is not, degree of support that he provides
—Availability and degree of effort required to obtain fuel and water

A separate study found that men outnumbered women at general health clinics (excluding maternal/child health facilities) by five to one (229, p. 78). Similarly in Afghanistan, a 1976 survey found that men outnumbered women at clinics by three to one.

Women usually respond first to family illness

Mothers, in conjunction with their husbands, mothers-in-law, and others, must also arrange treatment for sick family members. Mothers are usually the first line of response to diarrhea, and are also most likely to be responsible for arranging immunizations.

When an illness becomes serious, family members must decide whether and where to seek help. Who actually takes the child for treatment depends on such variables as local culture, distance to the provider, sex of the child, and severity of the illness. The common assumption that women are more available than men for this because they work less (or work less for cash) bears investigation because it is usually not correct. When women are the major seekers of outside care, access barriers that affect them also affect their children.

Women predominate as lower-level health workers

When outside help is sought, it is often women who provide the first line of care. Women have long performed essential community health functions, traditionally as healers and birth attendants, but increasingly as village health workers, nurses, and physicians. Even today these women are often the primary, or at least initial, source of health care for both women and men in rural areas. In many places, they represent an important programmatic resource, especially for maternal health and simple curative care.

WOMEN'S EDUCATIONAL LEVEL AFFECTS CHILD SURVIVAL

Women in almost every country are less educated than men, and even when they do achieve basic literacy, they may be less likely to use (and hence retain) it. Differences generally start at the lowest levels and increase, through higher school attrition rates, all the way to the top. According to the World Bank (389, p. 67),

> Factors affecting girls' access to education include: the social requirements for sex segregation and that girls be taught by female teachers; parental unwillingness to allow girls past the age of puberty to walk long distances to school; attitudes of parents towards the value of educating girls; and the opportunity cost to the family of child labor, especially of girls, which is required for family survival.

A number of countries and projects have made valiant efforts to change these attitudes, with many successes

Long lines are one of many barriers to women receiving vital preventive health services. World Bank/Drattell.

reported. However, overall differences remain. Education, moreover, must be supported by other new opportunities for women because girls and their families will otherwise see little value in the effort.*

Differential educational attainment profoundly affects women's ability to support their families and to provide effective nutrition and health care. Data from virtually every country where the issue has been studied show that children of educated women are less likely to die during infancy than those of uneducated women. One South Indian study (075), typical of many, found that

> the largest differentials in infant mortality were by mother's education, with a level of 130/1000 where the mother had not been to school, 80 where she had only primary schooling, and 70 where she had some secondary schooling.

Most studies have shown stronger correlations between the infant mortality rate (IMR) and mothers' education than between the IMR and fathers' education. Some correlations, though not all, have remained even with controls for family income. The only countries where differentials have been small have been ones such as Cuba where most women have completed basic schooling.

One study of infant mortality differentials in Chile in 1972 compared rates by cause for highly educated and uneducated women. Differentials by mothers' education were greatest for deaths due to poor sanitation, upper respiratory infections, inadequate nutrition, and undefined causes, (011). Numerous other studies have found that educated women have fewer children than uneducated women, a factor which is clearly related to infant survival chances.

Fewer links with women's own health status have been found, although one study in Zaria, Nigeria (265), reported that women with some formal education had only one-fourth the maternal mortality rate of uneducated women. Improved child spacing and timing also reduce maternal mortality.

According to the U.S. Census Bureau (235, p. 51),

> Education not only provides women with knowledge and an opportunity for employment in the skilled and higher status occupations of the modern sector, but also improves their access to all the resources of the society. Moreover, it alters their family and social situation in many subtle and not yet well-understood ways. Formal schooling takes women out of the home and away from traditional female activities for some portion of each day over several years; it exposes them to new ways of thinking about the world of marriage and childbearing, and often makes them more desirable marriage partners for young men of higher status.

Educated women (as compared to their less educated sisters) may be:

- less fatalistic about child health,
- more informed about health problems and appropriate responses,

*Girls' educational aspirations and attainments have risen rapidly in a few places (such as near the Anand Dairy Cooperative in India) after employment opportunities for women were increased.

- better able to manipulate health resources,
- more able to manage health related activities both inside and outside the home,
- more influential in family decision-making and resource allocation,
- more likely to come from wealthier, better educated families and to marry wealthier, better educated men, and
- more able to work for cash income, thus adding to family resources.

Even simple literacy allows women to read a growth chart or instructions for preparing oral rehydration solution, something which illiterate women must do by memory. Educated women, moreover, have fewer and better spaced children, a factor which is clearly related to infant mortality and maternal health.

While major international agencies emphasize female education as a route to health and fertility change, this is a long-term effort not easily accomplished through brief literacy classes or other one-time programs. According to Ware (369, p. 197), "No studies demonstrate that poor but educated women with limited access to effective sanitation or medical facilities nevertheless achieve significant reductions in child mortality." An experiment in India in the mid-1970s found that literacy classes linked to health education and clinical services had significant health benefits but that literacy classes by themselves did not (105). Even when facilities are available, poor women are likely to have much less time than wealthy women to use them, regardless of educational status.

DEVELOPMENT ACTIVITIES OFTEN IGNORE WOMEN'S TRADITIONAL ACTIVITIES AND ROLES

Planners long assumed that the benefits of economic growth would "trickle down" from immediately advantaged groups to those on the periphery, from cities to the countryside, from elites to the masses, and from men to women. Less attention was given to the distribution of benefits than to their total quantity.

In recent years, it has become evident not only that distribution matters but also that who participates in an activity has a great bearing on its chances for success. Many development activities have actually harmed women and their families by concentrating cash income in male hands, by reducing local food production in favor of cash crops, and by creating employment opportunities that cause men to leave their families. Many other efforts have failed because gender-biased planners consulted only men or directed implementation efforts to the wrong groups or individuals. Thus, for example, men are usually trained as agricultural extensionists in Africa and then work mostly with male farmers even though women do at least half the agricultural work. This is not to say that all development efforts have been bad, only that some have failed to take account of women's traditional activities and roles and have thus contributed less than they might have to national development.

Health managers, while not directly involved in other development activities, have to take an interest in them for a number of reasons:

- They may harm family nutritional status by reducing food production and shifting cash income to men.
- By ignoring traditional production roles, they may denigrate women's status, hence their influence in the family.
- They may break up families by encouraging migration to cities and even other countries.
- They may fail altogether, if women are ignored, leaving areas more impoverished than they were before.

Examples of these phenomena are rife (see especially 171, 372, 424, 289).

HEALTH CONDITIONS VARY BY SEASON

Throughout this chapter, discussion has alluded to the importance of seasonal factors—periods of hunger, increased disease, reduced water supply, and great fieldwork requirements. (These need not be, but often are, in the same season.) In most countries, diarrhea and malaria peak during the wet season. In Bangladesh, the highest quarterly fertility rate is approximately 50 percent higher than the lowest quarterly rate. Periods just before the harvest may bring great hunger, and women—because of intrafamily food distribution—are usually most affected. One study in Malawi (050, p. 6.18) found that men reduced food intake during a period of shortage by only 10 percent compared to 25 percent for women. Another in Bangladesh (117) found that the ratio between girls' and boys' deaths, already unfavorable to girls, increased significantly during a famine. Women must also work harder when crops are planted and harvested, and when nearby water sources dry up.

Evidence from Gambia, Nigeria, Bangladesh, Korea, and Tanzania (001, p. 11) suggests that women reduce suckling time or wean their children during the rainy season because of fieldwork requirements. In rural Gambia, six-to-nine month old infants receive 40 percent less breast milk during the rainy season. Weaning-age children are fed only half as often as they should be, while women's own food intake is also reduced by 40 percent. Women in their last trimester of pregnancy reportedly lose weight instead of gaining as they should (153, p. 66).

SECTION II: Learning by, with, and from Women

World Bank/Chernush.

CHAPTER 3

How to Learn and What to Look for

The situations of women and men, and the relationship between the two sexes, varies greatly by place of residence, social class, ethnicity, age, and other factors. Women in urban areas lead very different lives from those in the countryside. The situation of Moslem women may be very different from that of other women, even within the same country. Upper class women may experience different health problems and respond to them differently from poor women. Women who support households without male help are usually worse off than those in male-headed households. Educated women, factory workers, those in polygamous households, older women, and adolescent mothers all face special problems and cope with them in special ways. In agricultural areas, all of these conditions are affected by seasonal factors and occasional periods of shortage and abundance. Universal generalizations about women may well be incorrect for specific sub-groups.

The numerous research reports and country examples cited in this paper should be considered indicative of women's circumstances worldwide. Their validity with regard to specific individuals and groups should be confirmed directly, however, since local situations may differ. Learning by, with, and about local women should be a priority in every primary health care program.

AVAILABLE STATISTICS SHOULD BE CAREFULLY EVALUATED

Chapters 1 and 2 described common health and sociocultural conditions that affect women. Boxes 3 and 4

suggested quantitative indicators of female health and social status. Data relating to at least some of these indicators are usually available. Sources may include the census, vital registration, household surveys, and school and clinic records. These data may be useful, but in many countries they are not reported separately for men and women. Significant local variations are frequently missed as well.

Two important indicators of women's situation and activities are frequently underestimated. Labor force participation is commonly underreported, either because enumerators are not sensitive to women's activities or because the kind of work that women do is not officially recorded. Female heads of household are also undercounted (236) in many countries.

Statistics, moreover, while useful for identifying problems and measuring progress, are rarely adequate for studying underlying socioeconomic factors, as illustrated in Chart 2. First-hand knowledge of local women, gained by methods discussed below, is usually essential.

RAPID APPRAISAL REVEALS MUCH IN A SHORT TIME

The fastest, most direct method of learning about local women is to go into the field, talk with women, and observe their daily activities. Interviews may be conducted with local residents, officials, and traditional leaders, singly or in groups. Key informants may be identified. Health-service operations can be observed and a quick sample of clinic records reviewed. Much can be learned in a short time, provided that the right questions are asked and the right people visited.

A technique increasingly used in women's projects is the focus group interview, a way of bringing together a small number of women to generate information about local beliefs and practices. Staff of the Applied Nutrition Education Project in the Dominican Republic used 13 focus groups, each with about six women, to discuss child feeding and growth, and diarrhea prevention and treatment. Project staff took notes, recorded discussions, and used the information thus gathered to refine the project design.

Rapid appraisal may cause serious biases if appraisers are insensitive. Specifically:

- Rapid appraisal, especially in rural areas, may be seasonally biased if roads are impassable during the rainy season, or women are too busy to be interviewed.
- Women who work away from home may be missed regardless of season.
- Informants may tell visitors what they think they want to hear.
- Visits, especially by officials and foreigners, are likely to be disruptive and to impede casual observation and communication.
- Rapid appraisal, unless accompanied by use of key informants, reveals little about intrafamily processes.

Because of these limitations, rapid appraisal should always be followed by regular interaction with community members and by some of the more formal techniques discussed below.

Box 8: WHAT HEALTH WORKERS SHOULD KNOW ABOUT LOCAL WOMEN

—Health conditions that mainly or solely affect women
—Chronic or asymptomatic conditions for which women rarely seek treatment
—Women's own sense of community priorities
—Women's reactions to the quality, content, and convenience of available primary health care services
—Women's daily activity patterns and how they affect personal and family health
—Women's educational levels and access to communications media
—Women's economic and productive activities, inside and outside the family
—Resource (food and income) allocation patterns within the family
—Decision-making patterns within the family
—Family and non-family childcare arrangements
—Who cares for children when they are sick
—The capacity and functions of women's organizations
—Degree of women's participation in other community organizations
—Religious and cultural factors affecting women
—Factors affecting women's participation in health-sector training and employment

COMMUNITY SURVEYS ARE MOST EFFECTIVE WHEN WOMEN HELP GATHER INFORMATION

Many programs train health workers to do simple community surveys, sometimes using a standard questionnaire but often just a checklist of topics. It is important that interviewers be sensitized to women's concerns or, preferably, that women be used for information gathering. The participation of community women's groups in gathering information and analyzing and interpreting results can be invaluable.

Local residents may be interviewed in their homes or at natural gathering points. Schoolchildren have been taught to ask their parents about health matters and report to their teachers. Community health workers may use door-to-door visits as a way of becoming

Chart 2: METHODS OF LEARNING ABOUT LOCAL WOMEN

Method	*Description*	*Resource Needs*	*Strengths*	*Weaknesses*
1. Routine data	Service statistics, epidemiological reports	Information systems (collection, analysis, feedback)	Standardized, quantitative	Usually based on clinical records and thus miss much of the population. Usually not disaggregated by sex. Home activities not reported.
2. Rapid appraisal	Site visits, brief interviews, review of readily available data	Good observational skills	Can quickly reveal basic conditions and activities outside the home	Usually misses seasonal activities, conditions away from roads, intrafamily patterns, complex causal relationships. Women's economic roles are commonly misreported.
3. Community surveys	Semi-structured household visits by basic health workers, interpretation of results by community residents	Trained and supported health workers	Involves community in self-diagnosis	Not useful for quantitative measurement.
4. Formal research	Anthropological studies, sample surveys, time/budget studies, operational research	Time, money, and research personnel	Data useful for impact assessment, justification of new programs, and answering specific, well-formulated questions	Often expensive and not useful for adapting programs to changing conditions. Questionnaires may miss important economic roles and intrafamily patterns.
5. Project monitoring and evaluation	Analysis of existing activities: appropriateness, effectiveness, impact on women	Personnel, money	Can feed into program changes	Often discovers problems long after they occur.
6. Hiring of women managers	Preferential hiring activities	Appropriate candidates	May make management more knowledgeable and empathetic regarding women	Women, even when hired, may be given little power, especially in centralized systems. Managers are likely to be from urban elite.
7. Community participation	Encourage local women to speak for themselves, through women's groups or health committees	Time, political skill, and community agents	Helps mold program to expressed priorities and organizational capacity	Women possibly not used to being consulted and reluctant to offend men. Women themselves may not perceive important relationships.

Note: Many of the information methods listed here will be further discussed in a forthcoming WFPHA publication on an appropriate information technology.

Box 9: HOW TO LEARN ABOUT LOCAL WOMEN

—Talk to women often and deal with them sensitively.
—Avoid preconceptions and stereotypes; be aware of great local variability.
—Involve community women in project design, implementation, and evaulation.
—Use available statistics, but confirm their validity for specific groups.
—Learn in the field, through rapid appraisal, but be wary of seasonal and "rural tourism" biases.
—Encourage data collection by age and sex.
—Learn throughout project implementation, not just during planning.
—Look beyond the clinic to those not now served.
—Above all, be open to new information and learning by doing.

acquainted and learning about health needs and concerns. In Haiti, community leaders and health workers observed users of water pumps and recorded the distance traveled, quantity used, and manner of handling water (S. Buzzard, personal communication, 1985). Simple surveys may also be conducted at clinics.

Formal research, using participant observation or scientifically developed questionnaires and sampling, can be helpful, particularly if results are relevant to health programs and are quickly reported to local residents and officials (conditions often not fulfilled, however).

PROGRAMS SHOULD BE MONITORED FOR THEIR IMPACT ON WOMEN

It is most important that all health activities be closely monitored for their involvement of, and impact on, women. Problems and potential refinements not easily planned for may become more obvious as activities are implemented. Community women should participate actively in both routine monitoring and periodic evaluations.

The Indonesian Nutrition Education and Behavioral Change Project used focus group discussions to evaluate and refine educational messages. Women were interviewed approximately one week after each message was introduced to determine if the content was understood and the recommendations feasible.

SENSITIVITY TO WOMEN IS ESSENTIAL FOR HEALTH CARE STAFF

While the techniques described above and in Chart 2 are useful, they are of limited value if program staff from the field level to headquarters are insensitve to women's needs, problems, and activities. Sensitivity does not come from reading books about women's health but rather from day-to-day interaction and open communication among various staff levels. According to one report (260, p. 8), community-based health workers

> have assimilated a wealth of information about women in the course of their routine outreach and clinical activities. While these impressions are not systematically collected, they do offer valid insights which would help health clinicians and planners become more sensitive to women's opinions and feelings about health services and programs.

The problem is, as the same report notes, that senior health staff often effectively discourage upward communication.

While there is no simple remedy, explicit training and workshops regarding women and their role in development may help. The U.S. Peace Corps, for example, has developed specific curricula for this in its own training programs.

Women often communicate more freely with other women than with men. WHO/ 18070.

CHAPTER 4

Primary Health Care and Women's Knowledge and Resources

Probably the single most important step to more responsive primary health care is to broaden women's participation in planning, management (including local operations), and evaluation. Broad participation is highly desirable for a number of reasons:

- It helps managers learn about local women, about factors affecting women's and children's health, and about interests in new activities.
- It helps mobilize women's knowledge and resources.
- It raises women's status and recognition of the need to support women.
- It brings women into the learning process so that they can better manage their own activities.

Moreover, for some women, health work may produce an income or other immediately tangible benefit which may help them to improve the health and nutritional status of their own families.

COMMUNITY PARTICIPATION IS USUALLY WEAK AND SHOULD BE STRENGTHENED

Community participation is weak in most programs, partly because professional health workers and government staff find it difficult to share control, but often because women are inadequately involved. Recognized community leaders (who are usually men) may view health as relatively unimportant. Women, however, because of their family roles, are often more interested in health than men, and may in fact, already be organized to promote it. In Swaziland, for example, male-dominated health committees reportedly lose their sense of purpose once a clinic has been built, whereas women's groups show strong continuing interest (155). The failure of many community participation efforts in health may be related to the failure of other development activities; they may, in other words, be addressed to men when women have traditionally been the main persons responsible.

Women's community groups provide an entry point

Local women's groups of many kinds exist nearly worldwide and may provide an excellent entry point for primary health care. Many form spontaneously around economic issues or to help members with marketing, major life-cycle transitions, or other recurrent needs. The Self-Employed Women's Association (SEWA) in Ahmedabad, India, for example, was formed initially to protect workers against police harassment and exploitive money lenders. It eventually expanded to 10,600 members and, among other things, set up a cooperative bank and purchasing agency.

Some women's groups are formed initially around health issues and later move into economic areas as the connection with health becomes obvious. Others start with income generation and later add health.

Box 10: A STEP-BY-STEP PROCESS FOR ACHIEVING COLLABORATION BETWEEN THE FORMAL HEALTH SYSTEM AND WOMEN'S ORGANIZATIONS

"Guidelines for Incorporating Women into Primary Health Care Programs," published by the Pan American Health Organization (017, p. 23), outlines a step-by-step process for achieving collaboration between the formal health system and women's organizations.

1. Make an inventory of all women's groups and intermediary organizations that work with women. . . .
2. Set up communication and coordination channels with these organizations, in order to:
   —inform them of the primary health care plans, policies and goals of the Ministry of Health;
   —involve them in the planning, implementation and evaluation of government primary health care programs; and
   —facilitate the exchange of resources and information.
3. Encourage these organizations to accept, advocate and adopt as part of their ongoing activities the goals of primary health care . . . .
4. Develop feedback mechanisms so that . . . health planners can be informed of what women want and need. . .
5. Devise training materials and strategies for health workers aimed at establishing communication and collaboration between community health personnel and local women. . . .
6. Review strategies, plans and norms of the formal health system to insure that the participation of women has been included.

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- In Indonesia, for example, women's groups that arose spontaneously to obtain contraceptives from distant supply points later moved into weaving, tile making, chicken raising, and cooperative marketing (059, p. 42).

- SEWA, mentioned earlier, runs childcare centers and maternity and health insurance schemes.

- Harambee (self-help) groups in Kenya undertake nutrition and childcare activities and improve water supplies. Women also pooled resources to help each other install tin roofs, which were then used to collect rainwater (328, p. 149).

- In Samoa, Village Women's Health Committees, first formed in the 1920s, include virtually all adult women and have been responsible for ensuring birth and death registration, village sanitary inspections, control of flies and mosquitoes, construction and maintenance of village hospitals and health centers, and the feeding of village doctors and nurses.

- Philippine mothers' clubs identify households that need medical assistance, raise funds for repair or construction of health centers, participate in immunizations and diarrheal disease control efforts, assist with environmental sanitation activities—including building wells and latrines—support nutrition and health education projects, and engage in handicraft production, backyard gardening, poultry raising, piggeries, and so forth (390, p. 16).

- In Sierra Leone, a women's secret society called the Sande is traditionally responsible for maternal and child health, nutrition, domestic hygiene, and some aspects of herbal medicine (004, p. 46).

- In Guyana, women's groups affiliated with the Ministry of Labour visit work places to ensure good conditions.

- In many countries, women's groups have undertaken weaning food production to make money for their organization and its members. Women's groups in India produce the nutrition supplement for community nutrition centers and make a small profit. In Thailand, women's groups are making a weaning food for the community nutrition program (145, p. 32).

In many countries, women's groups manage communal gardens and kitchens, monitor community water sources, and organize community clean-up campaigns. Many groups also share childcare responsibilities. Comparable male organizations—with the exception of a fathers' club in Nigeria—have not been widely reported. (The Nigerian group was founded by fathers whose children had been hospitalized and who were, therefore, newly interested in preventive and outpatient care.) Women's groups like those described above are widespread and relatively independent of outside support. Outsiders, or even local men,* may not be aware of them, however, because few of these groups have formal structures or names, and many remain quiet for fear of threatening men.

Box 11: MOTHERS' CLUBS IN THE PHILIPPINES

In 1976, the Surigao City Health Office began organizing Philippine women in mothers' clubs. By 1979 these clubs petitioned the City Administrator for water pipes and assistance to build a gravity-flow water system to bring water from the mountains three to five kilometers away. The clubs were the key to the rapid and inexpensive implementation of the rural water supply program.

After initiating the project, the women took part in assisting analysts in the feasibility study by directing them to natural water springs. Throughout the project, the mothers' clubs provided cash donations, encouraged their husbands to volunteer, and cooked food for volunteer workers. Within 12 months the project was completed, providing water to more than 16,000 persons through 291 communal faucets.

Following project completion, the mothers' clubs began to promote sanitation and beautification projects. Toilet construction, garbage disposal, domestic and personal hygiene, mini-roads construction, and flower gardens were begun and carried out by mothers' clubs.

Essential to the project's success was the husbands' approval. During the initial organization of mothers' clubs, husbands were invited to participate in informational meetings. They participated in their wives' graduation ceremonies at the end of health training programs and provided essential voluntary labor for the water project.

Organized women can be valuable primary health care resources at the community level. In Swaziland, for example, women's groups are reportedly among the most effective community organizations. In Gambian communities, women follow the leadership of respected female elders, whose support is therefore essential for health projects. Their broad range of activities makes them excellent vehicles for intersectoral coordination, a primary health care ideal. A review of USAID projects (003, p. 24) found that "the participation of female beneficiaries in project planning and implementation is higher when projects are located in communities with indigenous formal or informal women's associations, or with a strong tradition of community self-help." A number of West African governments, including those of Niger and Senegal, have created women's commu-

*In Swaziland, for example, local men were reportedly unaware of the highly effective women's groups in their communities (155).

Box 12: MOTHERS' CLUBS IN BOLIVIA

Throughout Bolivia, fertile-age women are organized into mothers' clubs. Under the direction of Caritas, a social development agency of the Catholic Church, the clubs distribute PL 480 foods to the mothers and conduct weekly meetings during which children are weighed and measured by Caritas promoters or auxiliary nurses. Over 1,800 mothers' clubs now belong to the Caritas program. Mothers pay small dues to the club for materials and educational sessions. The clubs then pay Caritas for their supervision and training.

Caritas is working toward the promotion of child care and child health in addition to the food distribution activity. A new project aimed at making oral rehydration packets available in communities will use mothers' clubs as distributors. Thus far almost 20 percent of the clubs have added ORT programs.

A lack of Caritas promoters for the supervision of mothers' clubs is their main problem. The success of the food distribution program and expansion of health activities within the mothers' clubs is dependent on Caritas' ability to increase its training of promoters and nurses. Despite these problems, mothers' clubs have had a clear impact on child health.

nity organizing services (known in French as *Animation Feminine*) to better promote women's community activities.

Community participation starts with existing health-related activities and recognized local leaders

The best way to start is by identifying and supporting existing group activities as described above, since many have significant health benefits. Other activities that can then be developed include:

- organizing children for immunizations,
- convening women and children for growth monitoring, antenatal care, family planning, and other efforts,
- teaching mothers about oral rehydration, breastfeeding, weaning,
- developing mini-pharmacies to provide essential drugs at low cost, and
- selecting and supporting community health workers.

It is generally best, though, to start slowly and allow groups to gain self-confidence before adding new activities. Benefits should be made as tangible as possible and should be expressed through evaluation systems that the participants themselves can understand.

Efforts to stimulate community participation usually start with recognized local leaders, who are almost always men. Organizations collaborating with WHO's Women in Health Development program in Africa, for example, start by involving the male elders, even though most households are headed and managed by women. The elders reportedly accept women's activities mainly because they do not feel that they will disrupt the status quo. In a CARE project in Bangladesh (077, p. 8),

> Once a village has been preliminarily selected . . . village-wide meetings are held with men to explain the program and to elicit their approval and support. With the approval of those male villagers, the village women are brought together for a meeting, to explain the program and to introduce CARE staff. The staff then begin to work in the villages.

In one Philippine activity, female health workers sought loans to buy work animals for their husbands, "not only to include [them] in the benefits of their organization but also to ensure that [they] would continue to accept late meals and other inconveniences as appropriate trade-offs for the women's ongoing involvement in community activities for children" (095, p. 3). In some African countries, parallel activities are conducted in both women's and men's organizations where these exist (207, p. 14).

An important question for both primary health workers and women-in-development specialists concerns the degree to which they should work with groups limited to women. In many societies, this may be the only way in which women can learn about their strengths and can share problems frankly with others. In Swaziland, as elsewhere, "Women usually sit to one side of a council meeting and do not participate, even though they may listen and may be consulted by the council men on specific issues" (155, p. 13). Some difficulties can only be resolved if women take unified action to confront, or at least re-educate, men. Organized income-generating activities, which may contribute significantly to health, are likely to be taken over by men

Women's groups can contribute significantly to primary health care. World Bank/Witlin.

unless women get themselves organized first. Women are sometimes the only ones interested in certain activities (such as growth monitoring), so women's organizations may be the most effective vehicle.

Another issue concerns the degree to which women's groups should be encouraged to confront harmful practices and inequities. The ideas of educated, especially foreign, women and men concerning women's roles are often quite different from local ideas. Outside intervention can dramatize problems and generate resources for change. It can also create antagonisms, however, and even local women may not accept their cultural values. (This is particularly a problem in debates about circumcision.) Outsiders have to be sensitive to situations like this when they try to promote change.

This does not necessarily mean, however, that confrontation should be avoided when the issue is important enough and local organizations are strong. In areas served by the Bangladesh Rural Advancement Committee (094, pp. 77–78), women secured surprised but positive responses by unorthodox action.

- They walked to the local government medical clinic to demand that one of their group receive medical attention.
- They marched to a government office to request that tubewells be installed in their neighborhood.
- They surrounded and blocked the office of the local member of parliament to demand that they be allowed to participate in a food-for-work scheme.

Individuals working for Save the Children "have found that working within the parameters of what women's groups think appropriate . . . provides reasonable assurance of community acceptability. . . . It is also helpful if the groups include the older, respected women of the community" (207, p. 32). Activities have to be based on the strength of local women, not of outsiders; otherwise, local women will be worse off when their "protectors" leave.

Women's participation should not be limited to women's groups

No one should get the idea, however, that responsiveness to women should be limited to women's organizations or that major modifications in mainline health activities are unnecessary. Women's participation can make primary health care much more effective than it is now, but that participation should occur throughout the health system, not just in showcase projects. After reviewing a number of U.S. Agency for International Development (AID) projects, Dixon (003, pp. 98–9) concluded that women-specific projects are often more effective than general ones but they rarely command more than a small fraction of development budgets. Moreover, according to another reviewer (278, p. 22), "Separate women's projects have been found difficult to manage, beneficial to limited numbers, and generally with weak institutional ties to local ministries and governments."

After working initially with social welfare ministries and women's bureaus, the U.N. Children's Fund (UNICEF), like AID, moved to ministries of planning and agriculture, central development banks, rural credit groups, and training institutions, and found them financially, technically, and politically stronger (345, p. 27). UNICEF/Bolivia decided that for this reason, "as of 1984, there will be no 'women's component' as such, but rather women will be integrated into the activities of all projects and will form at least 50 percent of the participants" (348, p. 9). Many "women's activities," moreover, can be performed more effectively with strong male support, especially when family resource allocation and decision-making patterns have to be changed. Similar efforts should be made to change attitudes and broaden participation in male-dominated groups.

Another important question, almost never directly confronted, is whether activities should be postponed or even cancelled until women participate. It is estimated, for example, that about half of the improved water systems worldwide are not currently working due to inadequate maintenance or fuel. Many of the remainder are not used hygienically. Many water development workers do not consult at all with local residents, and those who do often work only with the established (male) leadership. Usually, only men are trained in maintenance, although women are likely to be more strongly motivated. Water carriers also need to be educated about appropriate water use. This may be a case where women's participation is absolutely essential and where money should not be spent at all until women's interests and preferences have been determined.

WOMEN SHOULD SERVE AS COMMUNITY HEALTH AGENTS

Women should also contribute directly to primary health care by serving as health workers and managers. Women predominate in volunteer positions in many developing countries, but few have reached managerial or policy-making positions, except sometimes as token representatives. Employment of women may have both direct and indirect health benefits: direct, because it may make services more accessible and culturally appropriate for women (and through them for their children), and indirect because it may increase women's income and status. Female workers can also be an important source of information for health managers. All of these benefits are likely to be greater for paid rather than voluntary employment.

Women serve as frontline workers worldwide. WHO 12035/ Whitney.

Female health workers increase women's access to health care

There is abundant evidence that health worker gender significantly affects both the kinds of tasks that workers perform and the degree to which workers interact with men and women. These effects appear to vary greatly from one country to another, however, often in seemingly unpredictable ways. A review of 52 AID-sponsored primary health care projects (263, p. 50) found that men had difficulty serving women in Bolivia, Sudan, and Afghanistan, but not in Thailand. In El Salvador, although women had no difficulty in consulting men, the majority of both men and women preferred to have a female health worker. (The program, though, had mainly trained men.) An Indian study (229, p. 78) that found a higher clinic attendance by men than women also found that male/female ratios were unaffected by the clinic workers' sex. In Saudi Arabia, the scarcity of female health workers has hindered the development of maternal and child health services (294, p. 25). In South Yemen

> two of the ten leading public health problems—severe anaemia and pregnancy complications—affect women exclusively, and the greater availability of female health volunteers is guaranteed to have a strong impression on disease incidence in this area (294, p. 47).

In Savar, Bangladesh, male health workers could not make home visits because women were generally home alone during the day. Difficulties of this kind appear especially common in Moslem countries, yet there may be important exceptions there, too.*

Gender may also affect the kinds of services and activities that workers assist. Female workers may be particularly essential for family planning and maternity care. In the Hanang project in Tanzania, male trainees had especially high failure rates in maternal and child health subjects. In Malawi, 95 percent of community health workers in one project were male. Largely barred from antenatal care and delivery services, they concentrated instead on sanitation. However, a study in the Philippines (215) found that 16 percent of traditional birth attendants were male. Male birth attendants have also been reported in Africa and Latin America.

Community health volunteers in India must be able to identify and respond to women's health needs, yet, according to one report (099, p. 260),

> In much of the past health work, ... a male has been entrusted with this job. This was inspite of the fact that he often was not socially able to mingle freely with the large female population or enter their major social domain, i.e., the kitchen. He was also not part of the female social network which is often ripe with health news and concerns. Thus, the male worker was often an "outsider" among the largest at risk population, even though he might belong to the same village.

In Swaziland, male health workers do not work at all with local women's groups even though they are the most effective community groups interested in health. On the other hand, reviewers of at least one project (in El Salvador) have reported that men were more successful than women at mobilizing community labor for latrine construction and small water systems. In Bangladesh, where men must approve community projects, a female project director used her male driver to initiate contacts with community leaders since she could not approach men herself (360, p. 5). For reasons like these, some projects have trained males and females for complementary activities.

Hiring of women increases their social and economic opportunities

Women commonly lack opportunities to gain community prestige, to move about outside the home, and to earn income with which to support themselves and their children. Health work can increase these opportunities. For example:

> In Bangladesh . . . the impact of the Matlab programs must necessarily include the social revolution created by nearly 100 young married women working in a traditional,

*In Indonesia, for example, one study (224, p. 222) found that 70 percent of the patients of young male health workers were female.

male-dominated society. The social change introduced by these female wage earners, the first in their community, may be greater in long-range impact than the specific health activities undertaken by the workers (092, p. 60).

A nutrition project in Guatemala found that school records for girls improved after the project hired female health workers. Even voluntary work, though traditionally female in many cultures, may increase women's prestige. In Sri Lanka, for example, women reportedly sought unpaid positions for this reason and because jobs allowed them to move about the community. Similar effects have been reported from Morocco. While health managers may not consider women's status their concern, it can have clear impact on the health of both women and their children, as indicated in Chapter 2.

All of these effects are likely to be greater if women are paid and work with rather than for men. As Dixon notes (003, p. 37),

> Although the use of volunteers permits women's projects to operate on a larger scale than would be possible if all staff positions were paid, the practice raises serious questions regarding the motivation of governments or donor agencies to provide serious funding for women's projects. It is doubtful that a large-scale project aimed at training men in agricultural techniques or industrial skills would expect male staff members to contribute their labor.

Often even modest payment for community health workers can bolster their prestige and influence. In Bangladesh, husbands at first objected to their wives' taking jobs but later welcomed it because it increased family income. A project assessment in Colombia reported that female promoters were both more respected and effective because of their salaries. Women in some countries have traditionally filled more voluntary positions than men—in Kenya and Sri Lanka, for example, they provide 80 percent of self-help labor for nursery schools, water systems, and community centers—and it may be both unfair and unrealistic to expect greater efforts. Sometimes the same individuals fill several voluntary positions at once, possibly increasing intersectoral coordination but also overburdening those involved. Voluntarism, moreover, may be declining as increasing numbers of women need cash incomes to support their families.

Payment may also work against women, however, because men will usually compete more vigorously for paying jobs. The majority of paid community health workers worldwide appear to be men (263,), a fact which may be partly due to men's higher educational levels and consequent ability to compete for paying jobs. In situations of high unemployment, men may be given preference out of a mistaken notion that women's income is less essential for family welfare. In one African country, female extension agents were paid less than male counterparts with identical training (053, p. 65).

Community selection processes may favor men

Although women are often more appropriate than men for community health work, there are many obstacles to their selection, training, and effective employment. The path of least resistance is usually to hire men, but this may not be best.

In programs with limited community participation, health trainees are likely to be nominated by the male community leadership. Women are sometimes nominated this way, especially for jobs considered to be low status, but they may be either relatives of the leaders or women who are already involved in many other activities. If community participation is broader, decisions reached by consensus or voting may also favor men. In one West African country, for example, communities chose men for training as birth attendants and maternal health workers, even though they were culturally barred from such activities.

Program staff often compound their problems by insisting that worker trainees meet minimal educational requirements. In Sudan, for example, "fixed education and language requirements are one factor in excluding women's participation as CHWs [community health workers]" (143, p. 32). Similar effects have been reported from Iran and Oman (316, p. 73). In Sine Saloum, Senegal, the requirement that trainees be literate in French led to the selection of young upwardly mobile males who quickly left their jobs. Since few rural women are educated, those who are hired (when education is a requirement) are often upper class city-dwellers who may have difficulty communicating with their clientele. While education, especially basic literacy, makes workers easier to train, it is not an essential requirement for many important community health functions. (See 315, pp. 28–30, for additional discussion.)

To increase women's participation, many programs now require that all, or at least some minimal proportion, of community workers be female. Staff of the Hanang project in Tanzania, after difficulties using male food demonstrators, rejected villages that did not select at least one female health trainee. In parts of India, the majority of health volunteers were male until the government decided that men should be accepted only if a suitable woman was not available. States such as Gujarat are relaxing educational and age requirements in order to recruit rural women. Others are attempting to recruit widows, married couples, or divorced women (065, p. 16). In Bangladesh, the government set a 20 percent quota and reduced educational requirements for female Palli Chikaksak (village health worker) trainees. Other

programs have worked closely with community leaders to achieve the same end.

It is often difficult to find suitable female candidates even when everyone agrees that they are wanted. Family resistance is often strong, especially with regard to unmarried women and those with young children. Problems may be especially acute in societies where women are traditionally secluded. For example, a 1976 survey in Afghanistan showed that only 26.8 percent of men would allow a wife or daughter to be trained. In order to overcome this and similar problems, many programs work with both women and men to overcome family opposition. The Bangladesh Academy for Rural Development, for example, worked with the Women's Cooperative Society to select community health workers, while the Tunisian government in El Kef worked with local chiefs and the Women's Union. In Lesotho, the staff of Scott Hospital had private discussions with husbands to overcome opposition to their wives' employment. Another tack for some jobs may be to hire older women. In spite of initial difficulties, resistance often crumbles once activities get underway, especially if employment brings income.

Men may work effectively with women, where this is culturally acceptable. WHO 16132/Almasy.

Training arrangements may effectively exclude women

One reason both their husbands and women themselves resist employment is that it usually requires lengthy training away from home, often alongside or under the direction of men. In West Bengal, "Female workers during the three month training period find it very traumatic to stay away from their children, especially if they are breastfeeding them" (091). Men in Afghanistan would not allow women to be trained if training removed them from seclusion or brought them into contact with men. In Bangladesh, shortage of dormitories particularly affected women because they were less willing than men to seek accommodation with local families. Many programs train in urban centers, and few make it easy for women to return home at night.

One solution to this problem is to bring training to the trainees. In India, for example, Gujarat state is creating temporary training centers that can be easily dismantled or moved when the local need has been met, and Maharashtra state has reduced the training period for women and moved fieldwork sites closer to trainees' homes. In Costa Rica, female trainees established a childcare facility, while in Bangladesh a dormitory was constructed for non-commuting women (003, p. 33). Training may also be given in a series of short segments, thus reducing the time that women must be away from home.

Female trainers may also be more culturally appropriate than males. In Afghanistan, women were trained by other women in a secluded location where they were able to maintain purdah. Some programs encourage women to bring their young children and provide breaks for breastfeeding. Others allow trainees to bring a chaperone. The Lardin Gabas project in Nigeria requires that breastfeeding trainees be accompained by a nursemaid. All of these measures require extra money, however, and female trainers, like the trainees themselves, may find rural accommodation and movement difficult.*

Women may face job conflicts that men can avoid

Though women should be preferred for many functions, especially in certain countries, they may face conflicts on the job that men are able to avoid. Common problems include:

- male harassment,
- inadequate housing,
- posting away from home, and
- conflict with family responsibilities.

Programs in India, Korea, and elsewhere have reported higher female than male turnover rates as a result.

Unfortunately, the cultures that most require female workers because of barriers to contacts between men and women also restrict women's movement within the community. An Indian report (065, p. 9) notes:

*To reduce these problems, the government of Lesotho is seeking a mobile van to house female trainers. In Afghanistan, arrangements were made to reduce the time that female trainers had to spend away from home.

> The problem of physical security is particularly acute for young, unmarried women living apart from their families, for without kinship ties in the community they are exposed to sexual harassment or exploitation in some areas. This problem is more recognized by female than by male officials; male observers sometimes explain problems as the consequence of "loose moral character" of the victim, while females suggest that the problem deserves more attention than it receives.

Measures to deal with these problems, mostly reported from Bangladesh (235, p. 64) and India (066, p. 19), have included the following:

- building quarters for female workers,
- working with district councils to find housing and reduce harassment,
- posting female staff to home areas so that they can live with relatives,
- joint posting of women from different ministries or departments,
- selection of older staff, and
- frequent supportive supervisory visits.

In Zimbabwe, the government plans to establish child-care facilities in district hospitals so that nursing staff can care for their children on-site. It may also be useful to post husbands and wives to the same location, although this may not work in some countries. In Mali and Bolivia, for example, those trained were often the wives of government employees and had to follow their husbands when they were transferred to another position. In Burkina Faso, over 90 percent of the country's trained nurse-midwives are located in Ougadougou, the capital, because they are married to civil servants. They are underused and drawing full salaries while the rural areas are without desperately needed midwives.

In Savar, Bangladesh, another problem with having female health workers was solved. Women needed bicycles for home visiting, yet only males were known to use them. There was considerable objection at first, but female cyclists were eventually accepted.

Male-female teams may improve women's access to health care

A number of programs have addressed this problem by creating male-female teams, often with complementary sex-specific functions. A common example is the "pairing" of male general purpose health workers with female traditional birth attendants, as has been done in Afghanistan, Senegal, and elsewhere. In other cases, men and women are trained for the same functions but for different populations. In Tanzania, where this was done, men became interested in traditional women's areas such as maternal and child health care, and women became interested in environmental sanitation (363, p. 56). In Oman, rural development teams consist of a male team leader, a male "social pioneer" for agriculture, a male health assistant for sanitation and supervision, and a female maternal and child health assistant for maternity services.

Husband and wife teams have evolved in some programs, either because the trained husband could not work effectively with women clients or because he was frequently away from home. In Egypt, for example, male health workers in at least one area have trained their wives to give injections and change dressings (231, p. 36). In Guatemala, the Family Planning Association trained husbands and wives (or some other combination of household members) so that care would always be available at the specific household. Family teams were found to be 30 percent more effective than individual workers.

Teams may be a good idea in some places, as illustrated above, although they may reinforce existing status differentials. In Costa Rica, for example, male auxiliaries have one year of training and travel up to 15 kilometers by motorbike, boat, or horse, while female assistants train for four months and travel only two kilometers.

Another consideration is cost. Many countries can hardly afford a single worker per community, let alone two, and some programs, such as in Andhra Pradesh, India, have had to drop teams so that the frequency of home visits or other contacts could be doubled.

WOMEN SHOULD ALSO PARTICIPATE AS PLANNERS AND MANAGERS

A 1980 review of USAID development projects (003, p. 21) found that women participated more as both beneficiaries and managers when projects were administered through women's units or associations rather than through general groups. It was found that "when women's programs are affiliated with larger male-dominated institutions, decision making on major policy issues tends to be transferred to men in the parent institution." This may occur because some men consider women's groups to have serious purposes. The same study also found that women were underrepresented on the staff of the donor agencies supporting women's projects (003, p. 22).

According to the Pan American Health Organization's (PAHO's) "Guidelines for Incorporating Women into Primary Health Care Programs" (017, p. 8), national women's organizations can assist in

> completing an in-country inventory of women's groups and the resources available for women in development projects; identifying the strengths and weaknesses of women's grass roots organizations; coordinating mass health interventions among scattered groups; collecting data from local women for project planning and feed-

A woman runs a rural health clinic in Chad. ICEF 9093/Murray-Lee.

> back; and promoting Ministry objectives (prenatal care, diarrheal disease control, etc.) through the community groups with whom they are already working.

Some national women's groups, however, are elitist and political and may not be particularly helpful.

While efforts to increase women's employment as managers should continue, female managers are neither an essential nor a sufficient condition for improving programs. Participants in a recent PAHO workshop (260, p. 8)

> felt that the attitude and level of awareness of the health official (whether an administrator or clinician) is much more significant than is the sex of that official. The important factor . . . is whether health personnel understand women's important role in making decisions about family health and recognize how essential it is that the health system look to women for opinions, support and feedback. In general, it was suggested that the sex of the health clinician or administrator is not a reliable indicator of his or her level of sensitivity or interest.

Women's conditions (like men's) vary greatly by social class and place of residence, so that even female managers must train themselves to be sensitive to unexpected conditions.

Moreover, women hired for prominent positions mainly because of political or donor pressure may be given little responsibility or authority. Women themselves may be reluctant to assert new ideas, either because they lack self-confidence or because the program as a whole discourages staff participation in decision-making (for both men and women). In some cases, women may be chosen because of their husbands' rank rather than because they have the necessary skills and interests. Jobs may be segmented, moreover, leaving women only the less prestigious functions.

Nevertheless, women have assumed increasing leadership roles in primary health care, as exemplified by the common practice of appointing women to direct rural health services or, as in the case of Tunisia, Liberia, and other countries, to serve as ministers of health. Ten of Nigeria's 19 state health commissioners are women. In Samoa, all rural hospitals are constructed, maintained, and run by women's committees.

A number of organizations are training female managers both to give them specific skills and to increase their confidence. Peru-Mujer, a women's organization based in Lima, has trained women from 15 marginal urban communities to take greater charge of family and community management. The Eastern and Southern Africa Management Institute in Tanzania is training senior and mid-level women managers working in the public sector. (The Institute also has a special program for both sexes to teach methods of increasing women's participation in economic development.) In Colombia, a series of workshops has been held to prepare female health workers for positions of leadership. The International Committee on the Management of Population Programmes (ICOMP) is sponsoring a project called Leadership and Management Development for Women Executives in Population and Related Social Sectors. Bangladesh, India, Indonesia, Malaysia, Pakistan, and the Philippines are identifying problems of women in managerial positions, assessing the existing training facilities, and developing a set of training modules geared to their needs. UNICEF has supported training programs and study tours in cooperative organization, banking and accounting, management, and leadership (346, pp. 14–15). The Centre for Development and Population Activities (USA) and its local affiliates in several countries also emphasize the training of women managers. Women's groups stress the need for "networking," that is, the establishment of linkages among different persons and organizations so that common problems can be discussed and joint action taken.

These are all welcome developments, although, as noted by the *WHO Chronicle* (379, p. 134), there is some danger that the concentration of women in primary health care (rather than their equal distribution throughout the health services) may reinforce primary health care's low status.

SECTION III: Working with Women to Make Primary Health Care More Effective

CHAPTER 5

How to Respond to Women's Health Problems

What can be done about the women's health problems discussed in Chapter 1 within the context of the socio-economic conditions discussed in Chapter 2? Four main strategies may be suggested:

- Strengthen current primary health care programs and improve women's access to them.
- Strengthen women's services and activities, especially for nutrition and reproductive health.
- Concentrate efforts on women who are at highest risk.
- Develop intersectoral activities to raise women's status and reduce time and activity burdens.

The first three of these are discussed in this chapter, while strategies influencing women's family activities and status are discussed in Chapters 6 and 7.

STRENGTHEN CURRENT ACTIVITIES

Women are greatly affected by the general quality of primary health care services and activities, and most efforts to strengthen them will in turn benefit women and children.

Improve access to services

One problem that frequently affects women more than men is difficult access to services. Obstacles that may particularly affect women include:

- conflict with essential daily activities, including employment, water and fuel supply, food preparation, and childcare,
- poor understanding of health problems and failure to recognize symptoms,
- lack of information about available health services,
- family resistance to travel outside the home,

A Sudanese midwife makes a home visit. ICEF/337/Almasy

- cultural distance from clinic settings and personnel,
- lack of cash for bus fares, clinic fees, and drugs,
- reluctance to be examined or treated by men,
- inappropriate clinic scheduling, including the separation of related activities such as family planning and child health,
- lack of privacy at clinics, and
- insensitive clinic staff, not trained to address women's health problems.

Thus, in Indonesia:

> Many women in Ngaglik were . . . reluctant to attend the rural health center... Modern health services, not surprisingly, are built largely on Western models. Patients coming to a clinic sit on hard benches (whereas most villagers are accustomed to sitting on the floor), waiting their turn to be called by health personnel whose middle-class origins are evident in their dress, bearing, and speech patterns. A mother bringing her child to the health center is unlikely to be given an explanation of her child's ailment or its treatment, yet may be told that she was wrong to try to treat the child herself. Clinics are usually open only in the mornings, the busiest time for women. Services are free only to those who present a letter from their village administrator attesting to their inability to pay. Obtaining such a "poverty certificate" is far too humiliating for most people. Even transportation costs to the clinic are often beyond the means of village families. Perhaps mainly for these reasons, the clinic approach to health services is not effectively reaching Javanese villagers. (427, pp. 319–20).

The factors discussed above are particularly likely to discourage preventive care and early treatment of potentially serious conditions.

Women may be more likely than men to consult traditional practitioners and less likely to use hospitals. In Afghanistan, for example, 25.0 percent of women sought health care from mullahs or shrines compared to only 5.3 percent of men. On the other hand, 3.0 percent of women sought hospital care in Kabul compared to 29.1 percent of men. Women may also make greater use of pharmacists, provided that they have the necessary cash.

Health workers' gender is often a problem, as noted in Chapter 4, yet one study in India, where women's utilization was one-fifth of men's (227, p. 78), found no difference between clinics staffed by female doctors and those staffed only by men. The study concluded instead:

> *Women, because of their responsibilities at home, and out of ignorance, tend to neglect their illnesses until they become too sick to move around and attend to their normal chores*. Often, too, they are dependent on others in the family to get them needed medical attention, which typically has the effect of delaying the health visit. Thus, women do not attend the health clinic when they ought to, and by the time they are sick enough to know that they should attend the clinic, it is much more difficult for them to do so. *Under these circumstances, the health care that women need is one available literally at their doorsteps and drastic in curative measure.*

Reduce cost barriers for women's health services

The cost of obtaining health care is often considerable, even in places where services are officially free. Cost elements include:

- service fees charged by clinics, private practitioners, traditional healers, and, sometimes, community health workers,
- gifts and other gratuities that may be required,
- sales charges for drugs and other supplies,
- transportation costs, and
- opportunity costs, that is, income foregone by missing work or other economic activities.

In Latin America and other regions with social security systems, women may not be covered, either because spouses are ineligible or because women's employers are not required to participate. In Colombia, for example, 39 percent of men receive social security benefits compared to 20 percent of women. In Belo Horizonte, Brazil, male-headed families are four times as likely as female-headed ones to have access to the main government-sponsored social security system (299, p. 26). Cash costs are likely to be accentuated by recent emphasis on user charges.

Measures to reduce cost barriers for everyone regardless of sex include:

- abolition of charges for preventive care, including antenatal and well child visits,
- use of fee schedules based on personal income,
- employer provision of health care or insurance, and
- employer provision of paid sick leave.

In addition, health programs can help local residents increase their income or allow alternative methods of payment for health care. Project Piaxtla in Mexico and the Centro Medico Evangelico in Honduras allow patients to pay fees by working in a communal garden (316). Traditional healers and birth attendants often make flexible payment arrangements with their clientele, which may be one reason for their continued popularity among women.

Among opportunity costs, the most important relate to loss of income from wage employment and trade. Women in casual labor are particularly affected because they have no job security and may simply be fired if they take time to go for health care. "Factory workers who disappear for the morning to the clinic with a sick child may well face the sack in a labor buyer's market." (369, p. 205) Provision of sick leave and factory health care is clearly desirable.

Schedule clinics conveniently; respect patient privacy

Clinic schedules may be arranged for worker rather than user convenience. An Indian study (227, p. 79), for example, found that subcenters were closed in the afternoon so that nurse-midwives could make field visits, even though afternoons were the only time women had free to go to clinics. Women who do get to clinics may be kept waiting long hours for a brief moment with a clinician.

Women may be particularly affected by the separation of child health, maternal health, and general purpose clinic sessions. One program in Tanzania, for example, reserved maternal and child health care for special sessions but found that few women or children attended. Since women did come to the clinic for curative care, the staff began to provide the full range of services daily using the availability of curative care as a way to attract women for preventive care (160).* Women may be reluctant to attend single-purpose family planning clinics because they do not want husbands or neighbors to know what they are doing. Indonesian clinics use popular growth monitoring sessions to attract women to concurrent family planning services. Integration in one Kenyan program led to a 50 percent increase in MCH attendance (004, p. 24).

Lack of privacy may be another barrier to service, especially for family planning and services requiring physical exams. While complete privacy within clinics may be difficult, even a simple cloth in a door frame may help.

Even in centralized systems, local health managers may be able to do a lot for women and children by making services more convenient and culturally appropriate. In Honduras, managers concerned about long clinic lines assigned each woman a specific day of the month for routine, especially preventive, care and guaranteed service for both her and her children on those days. Paramedics at the People's Health Centre in Bangladesh recommended home visits for antenatal care because women could not attend separate clinic sessions.

Reduce travel barriers by bringing services to the people

Outsiders do not always realize how limited women may be in their movements and how this may affect their access to services. Some women spend their entire lives within a mile of their birthplace. In rural Bangladesh, only 15 percent of women surveyed said that they had attended a clinic or hospital outside their village during the year before (077, p. 50). In India, 80 percent of clinic patients come from a radius of 4.8 kilometers even though some villages in the official coverage area are 40 kilometers away (303). Restrictions are most severe where women are secluded. In the Yemen Arab Republic, for example, women must always be escorted by a male relative when they travel to a health clinic (004, p. 47). Travel barriers operate against children as well, especially in places where only women take them to the clinic.

Obviously the best way to overcome travel barriers is to take services to the people, by training community workers and by arranging regular visits by mobile units and specialists. When referral is needed, some programs set up special facilities and encourage women to bring a family member with them. The Zambian government issues chits for free transportation.

Consider gender roles in designing health education

Information, education, and communications should support both clinical and family health activities, and, in the case of women, should also support general status improvements. Health educators may assume that their messages reach all family members equally and that, in any case, only certain family members need hear certain messages. Experience has shown, however, that men and women differ in their access to media and that some messages have to be deliberately addressed to both. In some cultures, moreover, mothers-in-law or respected female elders are the most important decision-makers about family health.

In India:

> Women, as the underprivileged among the underprivileged, are often not reached by the media. The sheer amount of work many of them have to get through in a day leaves them little time to relax and listen to the radio or read a magazine, even if they can afford them. . . . In some Indian villages there may be a community radio in a club; but only men can go to the club. Or women elsewhere may be excluded from attending public discussions. It is also a fact that the media cater mainly to masculine interests (146).

Local women can be of great assistance in designing educational programs. Working with the Indonesian government, Manoff International pretested nutritional messages with a sample of 330 households, each including a pregnant or lactating woman or a malnourished child. Women were interviewed intensively over a period of weeks to determine what nutritional advice was practical and to identify specific points needing resolution. The Tanzanian "Mtu ni Afya" (Man is Health) and "Chakula ni Uhai" (Food is Life) radio campaigns were heavily influenced by women as radio actors,

*Fears of extra workload and vaccine wastage (from partially used vials) delayed this change, but workload quickly evened out, and vaccine wastage was minimized by ordering smaller vials.

leaders of listening groups, evaluators, and writers of study guides and broadcast scripts.

In Bolivia, mothers' clubs reportedly meet monthly to discuss nutrition, health, and other subjects. The more than 28,000 mothers clubs in South Korea have been used effectively to convey family planning messages and services. Growth monitoring sessions and related education commonly involve mainly mothers. In addition, many governments have selected women rather than men as community health educators because of their presumably greater ability to communicate with mothers.

Health educators need to consider several critical questions in designing their programs:

- Must women be freed from other duties either to attend group sessions or to implement messages?
- Is money needed for recommended activities?
- Do husbands and mothers-in-law control family eating patterns and other health-related matters?

If any of these are answered positively, specific messages must be addressed to each of the key family members, as well as to mothers.

In the Yonsei Community Health Teaching Project in Korea, education about pregnancy and childbirth is directed not only to the mother but also to the mother-in-law (who often attends the birth), the husband, and the community in general (004, p. 30). The Chinese encourage expectant fathers to attend antenatal sessions to better understand their wives' nutritional needs and signs of possible problems during pregnancy. A project run by the Institute of Child Health and Primary Health Care in Lagos, Nigeria, used men as home visitors in order to educate fathers about maternal and child health. (See Appendix B for additional detail about this project.) The Bangladesh Rural Advancement Committee found that use of oral rehydration rose significantly when motivational sessions were arranged for men (155, p. 50). The WHO/UNICEF Joint Nutrition Support Program trains men as well as women in family nutrition. In parts of Bangladesh and India, men are the most important targets for nutritional messages because they perform the family shopping. On the other hand, in many countries, women, as the main water carriers, are the most important recipients of knowledge about well and pump maintenance. Family planning workers have long understood the need to motivate men as well as women to use contraception, and in Pakistan male-female motivational teams have been set up for this purpose (059, p. 37).

Measures to reduce interference with women's daily responsibilities include home visits and use of natural gathering points for health education. Community workers for the Bangladesh Rural Advancement Committee, for example, go door-to-door to train mothers in the preparation of oral rehydration solution. In Guatemala, educational cassettes were played at outdoor laundry sites (pilas) to reach women as they worked. Markets may also be good places to stage educational dramas. None of these measures actually frees women's time to take recommended actions, but they do at least partly respond to women's constraints.

Box 13: THE MALE RESPONSIBILITY PROGRAMME

The Male Responsibility Programme, a project of the National Family Planning Board of Jamaica, began in 1982 in response to a need for more male involvement in family planning and contraceptive decision-making.

The need for involving men became acutely obvious when it was recognized that they do influence women's attitudes toward contraception and, moreover, that they generally resist the use of contraceptives.

The Male Responsibility Programme has the following goals:

(1) In the short term, men will be motivated to take child-bearing and fatherhood more seriously; to use family planning methods themselves (i.e., condom and vasectomy); and/or at least to allow their female partners to practice family planning.
(2) In the long term, men will be educated in basic facts of human reproduction, human sexuality and contraception, among other topics.

To date, over 120 men have been trained as male motivators, and several of them are conducting educational programs in their communities.

Plans call for training an additional 200 men through a series of five-day educational workshops.

Over 800 men have been reached by the program through one-day motivational seminars held in each parish.

The program utilizes a variety of approaches including motivational seminars, educational workshops, radio programs, lectures, drama, printed articles, news media advertising, and the development and acquisition of educational materials.

Response from men has been overwhelming, demonstrating that they are not a "lost cause." More and more men are expressing a new and growing awareness of their own sexuality and a clearer understanding of family planning.

Source: 274, p. 5.

Tailor programs to seasonal conditions

Both home activities and clinical services are likely to be affected by seasonal factors. In Sine Saloum, Senegal, male health workers were virtually unavailable during the rainy season, so recommendations were made to upgrade female birth attendants to cover in their absence (062, p. 23). A report from Gambia (153) recommended special day care centers to reduce infant feeding problems during peak labor seasons. In Burkina Faso, health education regarding water-related diseases is given in May, just before the rainy season, while latrine construction is encouraged in the season when such work is most feasible (134). In Bangladesh, it has been suggested that family planning campaigns be concentrated on the calendar quarter with the highest pregnancy rates. ORT campaigns should also be seasonally focussed.

DEVELOP WOMEN'S HEALTH SERVICES

In most countries, women's distinctive health needs are centered around nutrition, reproduction, sexually transmitted diseases, and mental conditions such as stress. Occupational factors related to fieldwork and water supply also make certain health conditions worse for women than for men. Millions of women around the world are affected by violence. Health programs should be tailored to local women's needs and adopt their own priorities.

Nutrition programs should address women's own needs

Inadequate nutrition, aggravated by early and frequent childbearing, is almost everywhere women and girls' greatest health problem. Unfortunately, most nutrition programs, even those addressed to women, are mainly concerned with infants and children.

Of 180 health projects in less developed countries surveyed by the American Public Health Association in 1977 (028), 90 percent offered some form of nutrition services, 74 percent were working toward definite objectives in nutrition, but only 15 percent identified mothers as the target population. Even these services have not, in general, yielded the benefits expected. This is partly because of the difficulty of influencing the many interrelated factors that affect a woman's nutritional status, ranging from her physiological utilization of food and nutrients during pregnancy and lactation, through the socioeconomic influences on food availability and energy expenditure, to the cultural and educational conditions that affect her ability and opportunity to use available resources. Chart 3 briefly describes types of nutrition interventions and the specific constraints (detailed in Chapter 2) that each addresses. It is important to realize that isolated interventions rarely relieve more than a few of these constraints and that supportive measures are usually necessary.

Protein-energy supplementation programs: Programs similar to those described in the following examples are common in developing countries.

- The Nutrition Institute of Central America and Panama (INCAP), for example, provided pregnant women with a protein and energy-dense gruel twice a day at a distribution center.
- In Morocco, Catholic Relief Services and the government provided monthly food supplements accompanied by educational messages, to indigent women and their children,
- A maternal supplementation program in Colombia provided additional food for the entire family during the woman's third trimester of pregnancy.
- Brazil has launched a nationwide supplemental feeding program for pregnant and lactating women.
- A Mexican food-for-work program provided monthly supplemental foods for the entire family and an additional ration of powdered milk to pregnant women.
- In Taiwan, low-income rural women were supplemented continuously from the birth of one child through their next pregnancy and period of lactation.

A major problem with the design and evaluation of these programs is that they are commonly directed more to children than to women. Assessments are usually in terms of impact on pregnancy outcome and breastfeeding. Supplements, moreover, are generally available only during pregnancy and (sometimes) lactation, whereas females' special needs (described in Chapter 1) are life-long. The Taiwanese program cited above is exceptional.

Another common problem is that food supplements are usually shared within the family or women may get less family food because their needs are believed to be met elsewhere. This problem may be reduced by feeding women at a distribution point (as INCAP did) or by giving participants sufficient extra food for the whole family. A program in Morocco took the latter approach and had significant nutritional benefits (AID), but in Colombia, where every household member took home an 856 calorie supplement, women actually consumed only 155 calories (005, p. 62). Workers in an Indian program (105) reportedly reduced the sharing problem by making frequent home visits and inquiring about diet. A recent review (005) of supplemental programs found that on-site programs are more effective than take-home programs in improving maternal dietary intake, because sharing with other family members is reduced. However, on-site programs are more expensive than simple food distribution; and the travel, time, and cash costs imposed on participants limit attendance.

Chart 3: MEASURES TO IMPROVE WOMEN'S NUTRITIONAL STATUS

			Nutritional Constraints Affected					
Measures	*Description*	*Programmatic Requirements*	*Lack of Information*	*Food Scarcity*	*Cash Scarcity*	*Food Taboos*	*Family Food Distribution*	*Comments*
Protein-energy supplementation	Distribution of energy and protein-dense foods	Distributional system, preferably accompanied by health education and outreach	Reduced if there is an accompanying educational effort	Reduced for the life of the activity	Supplements are usually free	Not usually confronted	Likely to remain a problem unless supplements are sufficient for whole family or are consumed on premises	May create dependence on external food sources
Nutrient supplementation	Iron and folate tablets; iodine injections; vitamin A supplements	Distributional system, preferably accompanied by health education and outreach	Reduced if there is an accompanying educational effort.	Problem bypassed	Supplements are usually free	Reduced for the life of the activity	Problem is avoided	May create dependence on external food sources
Price subsidies and controls	Controlled pricing for basic staples	Government procurement and distribution system possibly accompanied by enforcement powers	Partially overcome through purchase incentives	Price controls may discourage food production	Problem is reduced	Not affected	Not affected	A politically popular but often short-sighted policy
Food fortification	Addition of nutrients to processed foods and salt, e.g., high protein flour, iodized salt	A market economy with a small number of producers	Problem is avoided	Problem is avoided if people buy staples	May still be a problem	Not affected	Can fortify foods mainly eaten by women and children	
Home gardening	Local production of leafy green vegetables and other nutritious garden crops	Strong educational effort, suitable crops; land	Must be addressed through strong outreach	Problem is reduced	Problem is reduced	Must be addressed	May put additional foods into women's hands	
Nutrition education		Trained health educators	This is the main constraint addressed by health education	Education likely to fail unless recommended foods are readily available	May be addressed through income-generation projects	May be addressed	Not affected unless other family members are included	
General health care	Prevention and treatment of malaria, worms, and infections, family planning	Primary health care personnel and logistics systems	Curative care may be only temporarily effective unless health education is given	Problem avoided	Still a problem unless drugs are free	Problem avoided	Problem avoided	May be particularly effective against anemia but only if basic food intake is adequate

Specific nutrient supplements: Nutrients such as iron folate, iodine, and vitamin A are provided in some programs, again usually for pregnant and lactating women only.

- Iron and folate are administered together in tablet form to be taken daily. Recommended dosage levels vary by country. The last half of pregnancy is most critical.
- While salt iodization is generally preferred, iodinated oil can also be injected in a single dose lasting three to five years or given in an oral dose lasting two years.
- Traditional birth attendants or community health workers may give women a single oral dose of vitamin A shortly after childbirth.

An Indonesian program gives pregnant women one ferrous sulfate tablet per day during the last three months of pregnancy. Pregnant and breastfeeding women are also counseled to eat one or two more dishes of nutritious food than usual. Workers for a Foster Parents Plan project in the same country distribute iodized salt, vitamin A, and iron to families with deficiency diseases. These measures avoid most of the nutritional constraints listed in Chart 3 but require considerable service infrastructure and motivational/educational effort.

Price subsidies or controls: Many Third World governments subsidize or regulate the prices of basic staples, but generally only in cities and for political and economic rather than nutritional reasons. Subsidies and controls may increase household purchasing power but also reduce production incentives for farmers. By changing the relative prices of foods, price subsidies can affect the nutritional quality of foods available to the household. Foods mainly eaten by women and children can be specifically subsidized, thus avoiding problems relating to intra-family food distribution.

Food fortification: Deficiencies in such basic nutrients as iron, vitamin A, iodine, and protein can be partly overcome by fortifying staple foods in the market economy.

- Commercially processed salt can be cheaply iodized to prevent goitre and cretinism.
- Vitamin A may be added to sugar.
- In parts of India, bread is fortified with lysine.
- Foods fortified with iron have included sugar, fish sauce (Thailand), salt (India), and wheat flour (Mauritius).

One author estimates that goitre prevention through fortification would cost 20 cents per target person per year worldwide, while fortification of sugar with iron would cost ll cents in Guatemala (005, p. 7l). Fortification is most useful when the foods involved are basic staples, such as salt and sugar, that almost everyone buys. It is also important that fortification not alter shelf life, taste, or appearance.

Box 14: LONG-TERM ACTIONS TO IMPROVE FEMALE NUTRITIONAL STATUS

The following long-term actions are important in improving female nutritional status.

- Encourage redistribution of available food within the family.
- Make it a prime national and local policy objective to ensure that those most in need have access to necessary foods.
- Introduce appropriate technology to reduce the mother's work load.
- Improve the status of women (through education, marriage and family laws to increase the age of marriage, and women's right to divorce).
- Make child-spacing services readily available.
- Improve water and sanitation systems to reduce parasite infestation.

Home gardening: In Africa and Latin America, women have traditionally maintained private plots for vegetables and sauce ingredients. Growing commercialization of agriculture has reduced this practice, to the detriment of women's and children's nutrition. Health staff in many countries now cultivate clinic gardens and encourage women's groups and individuals to do likewise. A CARE project in Bangladesh taught women to cultivate fruit trees and leafy green vegetables which provide vitamin A, calcium, and folic acid. UNICEF in Korea and elsewhere has assisted mothers to grow nutritious foods for home consumption.

Nutrition education: Nutrition education is an essential adjunct of most of the above measures, especially those, like nutrient supplementation and home gardening, that are based on informed voluntary participation. Many programs also include free-standing nutrition education components.

- In India, for example, a functional literacy class combined the development of literacy skills with improvement in knowledge about health and nutrition. A second program used oral instruction and demonstrations combined with food supplements and the provision of medical services. Auxiliary nurse midwives conducted both classes in the villages six evenings a week for two hours.
- A nutrition education program in the Philippines taught mothers about home economics once a week over a one year period.

Isolated educational efforts have generally not been successful because they have addressed only one or two of the nutritional constraints shown in Chart 3. The

Philippines program, for example, did not cause a significant increase in the diet of participating women,* while the Indian program that combined supplementation and medical care with education was significantly more effective than the one providing education alone (105). Women educated about nutrition may still lack resources to buy and prepare nutritious foods and face ingrained habits about intrafamily food distribution and diet during pregnancy. Efforts to aim nutrition education at husbands and mothers-in-law in addition to women may be essential to affect intrafamily food distribution (268).

Parasite and infection control: In countries where both health care services and general nutritional levels are adequate, control of infections and parasites may effectively improve women's nutritional status. A major international conference on malaria control in Africa recommended that pregnant women be given 300 mgs. of chloroquine prophylaxis per week, even in programs otherwise limited to curative care (362, p. 48). Control of hookworm and schistosomiasis requires major long-term efforts, although the former can be treated relatively easily when it is detected.

Birth spacing also contributes significantly to the reduction of anemia.

Nutrition strategies: As suggested above, comprehensive approaches to women's nutrition are likely to be more successful than those limited to a single "technology." An anemia-prevention program, within a primary health care approach, for example, could provide:

- nutrition education emphasizing the maximum utilization of foods that prevent anemia, and the need for vulnerable women to eat them,
- protection or treatment of other causes of anemia, such as hookworm,
- child spacing to allow women to recover nutritionally between births, and
- provision of iron and folate preparations for those in need.

Programs for iodine and vitamin A deficiency may also include both efforts to change diet (home gardening and health education) and specific nutrient supplements or fortification of staples.

Child spacing may be the single most effective health intervention for women

Child spacing is especially important for women under 20, over 35, or with numerous closely spaced pregnancies. Also in need are women considered likely to have an abortion, such as women in unstable unions or living away from their families, and adolescents without access to contraceptives. Family planning reduces maternal mortality due to pregnancy complications and spontaneous or induced abortions. It also allows women to recover physically (especially nutritionally) between pregnancies, and frees women's time to continue education and to develop careers. One recent report (287) estimated that 200,000 women's lives could be saved each year through better child spacing and birth timing. Moreover, if all women who want to limit their families could do so, maternal mortality would be reduced by proportions ranging from 15 percent in sub-Saharan Africa to 40 percent or more in Sri Lanka and Pakistan (291).

In most developing countries, the proportion of women protected against pregnancy is much less than the proportion that should be protected, either for medical reasons or because they wish to delay or prevent additional childbearing. Reasons for this discrepancy include:

- inadequate government policy,
- weak service delivery programs,
- access barriers, including distance, cost, and lack of privacy,

Breastfeeding helps lengthen intervals between births. World Bank/Chernush.

*However, the dietary habits of a significantly higher percentage of the control group had deteriorated, suggesting that the program had a positive impact in preventing the usual worsening of a mother's diet during lactation.

- women's lack of knowledge about the health risks of pregnancy or about the availability and proper use of contraceptives,
- couples' desire to prove their ability to bear children,
- couples desire to replace a child who has died or fear that living children may die,
- desire for a son,
- opposition to family planning for religious or other reasons,
- lack of communication between husbands and wives, and
- bad prior experience with contraception, either personal or by a neighbor.

A number of simple approaches may reduce these problems. One is to develop registers of high-risk couples to be visited periodically both before and after the adoption of contraception. Another is to reduce access barriers, either by making clinics more convenient and comfortable, or by using commercial and community distribution channels. A third is to strengthen two-way information flow—from health workers to families about the need for and methods of family planning, and from users to workers about the side effects of contraceptives. Efforts are often needed, moreover, to increase communication between husbands and wives about contraception.

Most health programs should offer couples a variety of contraceptive methods and should follow users closely to facilitate necessary method switching. Women over 35 who smoke or who are obese or diabetic should not use oral contraceptives. A simple screening list can be used to identify high-risk cases. Women should also be informed of other possible contraceptive side effects, such as the two-to-nine-fold increase in pelvic inflammatory disease associated with IUD use. The health risks of pregnancy are, nevertheless, much greater than the risks of contraception, and the provision of several methods will allow users to make informed choices.

Women's preparation for maternity should begin in childhood and continue throughout their reproductive years

The nutritional deficiencies described above affect formation of pelvic bones and become cumulative as women experience successive pregnancies. Maternity care should, of course, focus on natal and postpartum periods, but concern for maternal health should continue until women have passed their reproductive years.

Elements of immediate antenatal and postpartum care include the following:

- iron, iodine, folic aid, and energy supplementation,
- tetanus immunizations (two injections at least six weeks apart),
- health education addressed to both mothers- and fathers-to-be,
- identification, monitoring, and possible referral of high-risk cases,
- hygienic delivery, and
- breastfeeding promotion.

These are more fully described in Chart 4 and in *Improving Maternal Health* (004, p. 17).

Abortion-related morbidity and mortality must be addressed

Abortion is an emotionally charged issue which many governments might prefer to ignore. To some people, the unborn fetus is a human being with as much right to life as any other person; hence, induced abortion is murder. Other people believe that life begins only at birth or at a point 24 to 28 weeks after conception when viability outside the uterus is possible. For these people, the issue concerns women's right to control their own fertility. Regardless of how one feels about induced abortion, the continued high mortality that results from it must be recognized and addressed.

The legal status of induced abortion ranges from total prohibition to elective abortion at the request of the woman. Even within countries, the law may be conservatively or liberally interpreted by different regions and practitioners. In Turkey, for example, where abortion laws are restrictive, the procedure is nevertheless performed by private gynecologists in urban areas. In rural areas, on the other hand, it is performed only by untrained local midwives or by pregnant women themselves. Although abortion is legal in India, over 90 percent of abortions there were performed by unauthorized persons in 1981 (389, p. 175), indicating that legalization by itself may not be an adequate remedy to the problem.

Often the most effective way to prevent abortions is to make contraceptives readily available, especially to young unmarried women and to older women who do not want additional children. When this was done in Chile between 1964 and 1978, for example, hospitalization resulting from unsafe abortion fell by one-third, while contraceptive usage rose from 3.2 percent to 23 percent (310, p. J-669). Abortion is still widely resorted to because it is easier to obtain and less "public" than use of contraceptives.

Abortion performed therapeutically during the first three months of pregnancy is quite safe, even on an outpatient basis, and many argue that services should be made readily available. Morbidity and mortality rise with the fetus' gestational age but are still much less for properly performed procedures than for abortions done by untrained practitioners.

Chart 4: PROGRAM RESPONSES TO MATERNAL HEALTH PROBLEMS

Maternal Health Problems	*Program Interventions*
Complications of childbirth; infections, eclampsia (convulsions), slow labor, malpresentation, multiple pregnancy, retained placenta, pre-eclamptic toxemia, ruptured uterus, placenta previa, etc.	• Give prenatal screening and preventive care • Train traditional birth attendants and other community-level workers to recognize and refer high-risk pregnancies (as defined by the program); to discontinue dangerous practices; to use good hygiene at birth; and to treat certain complications of pregnancy and delivery • Train health personnel and establish and/or improve facilities to give prenatal, delivery, and postnatal care • Educate the public and public officials about the health effects of female circumcision
Hypertensive disorders of pregnancy (e.g., toxemia, high blood pressure)	• Give health education to make dietary and other lifestyle changes • Screen and refer • Treat locally with drugs and education
Maternal malnutrition	• Give nutrition education • Organize food supplementation • Give birth-spacing education and assistance • Give vitamins to pregnant women • As part of prenatal care, treat hookworm and other infestations and infections that use up maternal calories • Organize or assist gardens and other projects to grow food for local consumption • Organize or assist income-generation projects for women to enable them to buy more food
Anemia (mostly iron deficiency)	• Screen pregnant women to diagnose • Educate to prevent hookworm and treat existing cases • Give iron or iron/folate tablets to anemic women • Give malaria prophylaxis or treatment • Give birth-spacing education and assistance • Give nutrition education (for women to eat more iron-rich foods)
Complications of abortions	• Provide safe abortion services • Provide family planning services • Educate women not to seek unsafe abortions • Provide mechanisms for adoption of unwanted children
Ectopic pregnancy	• Detect gonorrhea and treat it and associated PID • Recommend birth control methods other than IUDs for women who have had PID • Detect early; refer women for appropriate treatment • Teach health workers how to avoid rupturing the ectopic pregnancy
Sequelae of female circumcision	• Campaign to stop female circumcision • Screen and refer high-risk women for institutional births • Have well-trained and supported personnel attend births
Malaria	• Give prophylactic drugs to pregnant women • Treat suspected cases of malaria among pregnant women • Take vector (mosquito) control measures
Goitre	• Make sale of noniodized salt illegal • Given nutrition education (to eat more foods with iodine, especially salt water fish, and to avoid foods that inhibit iodine absorption) • Give iodized oil injections intramuscularly
Diabetes	• Encourage severely diabetic women to use contraception, especially nonhormonal methods • Provide therapeutic abortions if mother has renal or vascular complications • Give special pregnancy and labor care—double insulin, strict antenatal monitoring, vitamin and iron supplements, C-section in many cases • Educate diabetic women to complete childbearing when they are young

Maternal Health Problems	*Program Interventions*
Discomforts of pregnancy such as nausea, fatigue, and swelling	• Give health education for women to rest, eat many small meals, etc. • Give drugs such as aluminum sulfate or local remedies
Sexually transmitted diseases (STDs)	• Give education to prevent sexually transmitted diseases (by limiting sexual partners and/or using condoms) • Give education to recognize signs of STDs and to seek medical help • Screen pregnant women for STDs (clinical diagnosis or laboratory exam) • Treat persons with STD (particularly if pregnant) and their contacts • Put silver nitrate or other solutions in infant's eyes at birth
Low birth-weight babies	• Screen pregnant women to identify malnourished ones; take steps to improve their nutritional status • Provide family planning education and services, especially for adolescent women • Promote breastfeeding and postpartum abstinence • Give public education for women to seek prenatal care • Improve the quality of postpartum care • Encourage pregnant women to moderate smoking and alcohol consumption • Cure or prevent infections in pregnant women
Neonatal tetanus	• Give tetanus toxoid immunizations to all women of reproductive age (where prenatal coverage is low) or to all pregnant women (where prenatal coverage is high) • Train persons who attend births to use good hygiene

Source: 004, pp. 5–8.

Textbook techniques for dealing with sexually transmitted diseases may have to be modified

Efforts to deal with sexually transmitted diseases may include health education, greater use of condoms, screening of high-risk women, and, of course, curative care for those infected. The standard epidemiological technique of investigating sexual contacts of infected persons is rarely feasible or culturally realistic in developing countries. In developed countries, and presumably in many developing ones as well, infected women postpone their first clinic visit much longer than do men.* Both men and women need to be reached with innovative programs.

The Costa Rican Ministry of Public Health, in conjunction with the Social Security Administration, has adopted the following policies and programs:

- immediate treatment of patients who come into clinics and hospitals with signs and symptoms of sexually transmitted diseases,
- investigation of contacts following standard guidelines,
- laboratory tests on pregnant women, applicants for marriage licenses, blood donors, and family planning clients,
- free care to those with proven cases,
- training of community leaders and rural health workers to carry out health education programs for adolescents and young adults,
- sex education in schools for school children and the general public,
- nationwide distribution of medicine, and
- legislation to modify laws that hinder treatment: for example, laws that make it difficult to treat minors without their parents' consent (104, p.5).

To prevent misuse of drugs, many programs insist on full laboratory diagnosis before initiating treatment. This is often difficult and may inhibit treatment so much that conditions become worse. Researchers in Swaziland found that 70 to 80 percent of patients with sexually transmitted diseases had gonorrhea, so health workers were authorized to treat them all for this disease without awaiting confirmation. Those who did not respond were given other drugs.

Policies toward female circumcision should be locally determined

Female circumcision, like abortion, is a sensitive and emotionally charged practice. Circumcision is widely considered an instrument of men's control over women, one that results in deaths and psychological and physiological trauma. Circumcision is nevertheless a deeply

*McFalls and McFalls (219) report that men wait an average of 10 days in developed countries while women wait 100.

entrenched cultural rite that should be respected, though discouraged and made safer. Since many international groups are working to abolish circumcision, an underlying issue concerns the role of outsiders in promoting change.

Efforts to restrict or abolish circumcision have included national legislation, health education, and publicity.

- The Sudanese government in 1946, for example, prohibited any "hurt to the external genital organs except to remove the free and projecting part of the clitoris" (296, p. 91).
- Though Egypt has no law, a special Ministry of Public Health (MOPH) committee resolved in 1959 that: a) non-doctors may not perform female circumcision, and b) partial clitoridectomy is allowed. A 1978 resolution forbids circumcision in MOPH health units or by traditional midwives (037, p.5).
- Legislation was suggested in Ghana in 1947 but not enacted. In 1980, chiefs in the Upper East enacted laws banning the practice (169).
- Kenya outlawed female circumcision in 1982 (168).
- The Ahfad University College for Women, Omdurman, Sudan has undertaken a three-year welfare scheme in four villages which includes educating women on female mutilation as well as other health-related subjects (296, p. 108). It also held a 1981 workshop for religious leaders, medical specialists, psychologists, sociologists, health workers, midwives, teachers, and students.
- The Cairo Family Planning Association has organized six meetings and two training courses for health care professionals, as well as its own family training courses, which incorporated educational material on female circumcision. The association is also developing a small booklet for less-educated groups and conducting seminars in universities, nursing schools, child welfare centers, and hospitals.
- UNICEF is supporting an income-generation project for village midwives in Kadugli, Sudan, to reduce midwives' dependence on income from circumcision.

Some of these efforts, unfortunately, may produce short-term backlashes or drive circumcision underground, although they may sow the seeds for beneficial long-term change. Thus, in Sudan, parents have reportedly circumcised daughters at younger ages for fear that the practice would be totally outlawed, while an Egyptian researcher describes the death of a circumcized girl whose parents feared arrest if they took her to a hospital (232). In Burkina Faso in 1975, a radio campaign against circumcision was stopped because of strong male and female reaction (329). According to UNICEF News (112, p. 29),

> Many African women fiercely resent the intrusion of outsiders whose own value systems do not equip them to sit in judgment on a practice seen as a purification bestowing honour and status, not as harmful mutilation of genital organs.

One policy option not widely endorsed is to make circumcision safer and to encourage acceptance of less extreme forms. In Djibouti, for example, those advocating abolition have urged parents to bring their daughters to clinics where mild procedures are performed and parents are told that even minimal circumcision is unnecessary. The World Health Organization does not condone this "reform" because it appears to legitimize circumcision, but the recently formed Inter-Africa Committee on Circumcision accepts that this may be a good method to promote gradual change (275, p.9).

It is important that health managers understand the prevalence of circumcision, the conditions under which it is performed, and the immediate and long-term health problems that result. While seeking to change current practices, they should, nevertheless, understand and respect the profound family and cultural values that circumcison represents. In some cases, formal data collection on these topics may be useful to publicize the problem and create pressure for change. It is generally agreed that advocates of change should work closely with indigenous opinion leaders and not anticipate rapid reform.

Publicize and combat violence against women

The Bangladesh government in 1983 promulgated the Cruelty to Women Deterrent Punishment Ordinance in order to check murder, abduction, and trafficking in women. In India, the press and parliament publicized dowry killings in an effort to increase public concern and, hopefully, action (324, p. 11). Also in India (191, p. 13),

> In Dhulia, in northern Maharashtra State, local women have succeeded in putting an end to wife-beating in 50 to 100 villages. These women are mainly agricultural laborers and poor farmers. They had joined with men to form a Toilers Organization to struggle for humane treatment from the landowners and to negotiate for decent wages. But the women soon realized that—although they were working shoulder-to-shoulder with the men against the landowners and the government—their husbands were still coming home drunk and beating them up. The women then came together. After some discussion, they marched on the local brewery, broke the pots and bottles of liquor, and threatened to tie up anyone who dared brew liquor again. When any man beat his wife, the other women marched to the house and compelled him to apologize to his wife, promising never to beat her again. Furthermore, when a woman agricultural laborer was raped in Nadurbar by a landowner, she did not blame herself or keep quiet about it. She went out into her village and other villages and denounced him. Then the women dragged the landowner out of his house, smeared him with cow dung and black soot, made him sit on a donkey and took him around to all the villages. Nor was the raped woman scared to get herself treated medically.

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Other examples of both the problem itself and of action to overcome it should be publicized.

Screening and prompt treatment will reduce cancer deaths

Pap smear screening tests, accompanied by prompt treatment of detected cases, can drastically cut cervical cancer mortality. China, for example, has reportedly cut the cause-specific mortality rate by 93 percent (014), and major decreases have also been reported from Cuba and Puerto Rico. Elsewhere in Latin America and the Caribbean, effective programs could reduce related mortality by 40 percent (283).

PAHO recommends that screening programs be adapted to local resources and epidemiological factors. Cervical cancer develops progressively over a period of 15 to 20 years, but it is most easily treated early through minor inpatient surgery. In most countries, screening every five years is adequate, starting at age 25 to 30 and continuing until 50 (394). Cancer registries should be developed in every country to document epidemiological factors and measure program impact (255).

Many Latin American screening programs have not reduced death rates because they have missed the women most at risk and have failed to treat detected cases. Family planning clients may be needlessly screened every six months while poorer, less educated women may never be screened. Husbands and fathers may resist women's vaginal exams. Few programs have the staff to re-contact women with positive smears, and the women themselves, misinterpreting the educational messages that Pap smears prevent cancer, do not follow up themselves. Women screened in family planning clinics may be reluctant to give their correct street addresses. Cancer leagues, which screen women in many countries, are often inadequately linked to treatment facilities.

These problems may be ameliorated by organizing workshops for men and by conducting national campaigns every third to fifth year with mass media publicity. To preserve women's anonymity, clinics may record only the patient's neighborhood of residence so that discreet inquiries can be made to locate those needing follow-up.

Women in the fields may be exposed to parasites, extreme fatigue, and dangerous pesticides. World Bank/Sennett.

TARGET HIGH-RISK WOMEN

Women almost everywhere suffer distinctive problems, yet some targeting of activities is essential to reach those at greatest risk. Often those most in need of help are least likely to get it, either because they are less informed and able to afford care, or because they live in a poorly served part of the country.

Special outreach, even beyond women's groups, may be needed to identify and assist high-risk groups:

- heads of household,
- refugees,
- casual wage laborers,
- women with numerous, closely spaced pregnancies,
- women considered likely to have an abortion,
- young single women living away from home,
- married women without sons, and
- women without adequate child care arrangements.

Additional risk factors apply to pregnant women (see 004). The list of women at risk, and the degree of priority given to each category, vary by locality and should be locally decided.

Surveillance of at-risk women should be implemented through primary health care workers, traditional birth attendants, women's associations, mothers' groups, or senior schoolchildren—especially girls—to better assure reaching all women at risk in the community. Simplified techniques for assessing female nutritional status, such as weight or arm circumference measured with tri-colored arm tapes, should be used. Women can also be screened for anemia by inspecting their lower eyelid and comparing the observed shade of pink with a standard. A simple mother's card, similar to a child's growth chart, can constitute a comprehensive, informative, and simple tool for surveillance.

Many programs target activities on the "poorest of the poor" or some other category, but few do so within individual communities. One project in Bangladesh focussed on women without land, a group that included above-average proportions of household heads and casual wage laborers. In Panama, the Institute for the Training and Development of Human Resources, assisted by CARE and the Overseas Educational Fund, has developed a training and income-generation project for female heads of household. In many developing countries, community health workers prepare family registers that include risk-related information, but any "focussing" that follows is usually limited to family planning and sometimes maternity care.

CHAPTER 6

Assisting Women to Promote Family Health

This paper has maintained throughout that women are important in their own right and not just as mothers. Even in programs primarily directed at children, women's health should be a major concern because of its influence on neonatal survival and the mother's ability to provide child care. Women, however, do have special roles within the family that extend beyond their own health, and primary care programs should assist women to carry them out.

NUTRITION ACTIVITIES SHOULD FOCUS ON WOMEN

Mothers are the natural (though not the exclusive) focus of efforts to reinforce breastfeeding and weaning. Growth monitoring programs depend on women's participation. Activities in all three areas are likely to succeed only if they respond to women's daily and seasonal work routines and do not add to already excessive time burdens. Women should generally plan, manage, and evaluate nutrition activities, but since men often buy the food and determine intrafamily allocation patterns, they must be involved as well.

Encourage and facilitate breastfeeding

Breastfeeding should be supported because it improves infant nutrition, transmits maternal antibodies which then protect the infant, reduces exposure to contaminated drinking water, and delays subsequent pregnancies. Breastfeeding promotion is not always simple, however, and working women and those in transitional societies need strong social, even legal, support to initiate and continue it.

Women who breastfeed and work outside the home have only three basic options, namely:

- to carry the baby with them at work,
- to arrange flexible or limited working hours, or
- to arrange workplace childcare.

The first option, though widely practiced, is not ideal because it limits both the mother's work opportunities and the child's freedom of movement. It also exposes the infant to hot sun, rain, farm animals, and other hazards. Flexible working hours are difficult to arrange outside the family, although some women manage two part-time jobs with a break in between.

Laws in many countries require employers to provide maternity leave and breastfeeding breaks, often with pay (see childcare discussion below). Laws are also needed to enforce the WHO/UNICEF code on the marketing of infant formula and possibly to encourage breastfeeding in hospitals. Women's groups often take a leading role. For example:

Breastfeeding women need additional nutrients to maintain their own health. ICEF 8758/Wolff.

> The Breastfeeding Information Group in Nairobi, Kenya, carries out a variety of activities, including monitoring infant feeding practices in hospitals, holding training courses for traditional midwives on the subject of breastfeeding, and counselling for individuals. They are extending their activities to rural areas and produce reading materials in Swahili and other languages commonly spoken in Kenya (390, p. 15).

Similar groups are active in many countries.

Breastfeeding education should be addressed to both mothers and fathers and may need to be concentrated on seasons of peak agricultural labor when women are under strong pressure to spend more time in the field. Fathers can facilitate breastfeeding not only by praising it but also by partially relieving women's routine household and agricultural burdens. Their support may also be needed to encourage breastfeeding mothers to eat more and better food.

Men should be encouraged to share responsibility for maternal and child health and family planning. ICEF 9264/Thomas.

The whole family should support good supplemental feeding practices

Infants should be given supplemental foods as early as four months after birth, although breastfeeding should, of course, continue much longer. Maintenance of child growth is often difficult at this time, both because of inadequate feeding and because of infections and diarrhea caused by contaminated food and water.

Appropriate supplemental foods are not generally those fed routinely to other family members. Infants need calorie-and protein-dense foods several times a day, not just at adult meal times. These foods should be prepared hot each time to avoid bacterial growth in non-hygienic storage containers. Women are particularly affected by the requirements if they are the ones who collect fuel and water. Women who labor into the evening may find their children asleep before they are fed. (They should be awakened.) Men, grandmothers, and older children should be educated about weaning to help alleviate these problems.

Weaning foods may come from several sources including (145):

- home preparation,
- local production by mothers' clubs or other groups,
- national production, and
- importation.

The appropriate choice or combination of choices for a given locality depends on:

- women's income level and control over family resources,
- the capacity of women's groups to undertake local production,
- the availability of appropriate home or community technology,
- the degree to which women can accept new burdens, and
- relative costs.

Choices should also reflect the strength of distribution systems and the capacity of outreach personnel to teach new food preparation techniques. Obviously, the more managers know about women's preferences, resources, and constraints, the better a program they are likely to design.

Feeding may remain a problem even when the right foods are available. Small quantities must generally be cooked several times a day, requiring the caregiver's presence and time as well as extra firewood (which the mother usually has to obtain). Mothers who spend part of the day away from home may either stuff their child and then skip feedings or store food in some convenient container for feeding by a child minder. Force feeding does not work because children's stomachs are small, while storage may be dangerous because bacteria multiply rapidly in hot climates.

Growth monitoring should encourage, not chastise, mothers

Growth monitoring programs are universally addressed to mothers because they are the principal child feeders and caretakers. Women's groups are excellent vehicles for growth monitoring, not only because they are natural congregations but also because they often deal with a wide array of women's concerns. Field staff report that mothers respond with great interest when they understand growth curves and their own child's progress (or lack thereof). Growth monitoring efforts have to respond to women's learning capacities, schedules, and workloads.

The reasons for growth faltering are often sociological and cultural as well as biological. If children are fed the wrong foods or not enough, it may be because women and children are fed last or because men decide what will be eaten. Weight loss during infection may occur because the child refuses to eat, not because food is withheld. As noted earlier, lack of appropriate weaning foods may be due to women's numerous time burdens and lack of access to time-saving technology. Growth monitoring is likely to be most successful when health staff work with and support women's natural concerns and when remedial efforts are addressed to both men and women.

WOMEN CAN DO A GREAT DEAL TO IMPROVE HOME HEALTH CARE

Women can do a great deal to improve home health care and to increase family use of preventive health services. For child survival, their activities are most important in oral rehydration therapy, immunizations, and family planning.

Women should be trained in oral rehydration therapy

Women, as the principal child care givers, are usually the first to see sick children and the first to take responsive action. They need to know both what to do (administer appropriate fluids and foods) and what not to do (suspend breastfeeding). They also need to know the signs of dehydration and where to get help when home therapy is no longer enough.

Health practitioners should recognize certain practical constraints in their advice to mothers. One is that an overly strong recommendation to use only boiled water may cause busy women to delay or omit treatment, when non-treatment may have more serious effects than use of polluted water. Women should be encouraged to boil water but not chastised if they are unable to. A second constraint is that some mothers may not be able to stay home with their sick children. This means that treatment by an alternative caregiver may be unavoidable. In both cases, encouragement to mothers rather than creation of guilt feelings is the preferred approach.

Immunization sessions should be convenient for mothers

Preventive health activities are widely considered discretionary, and overburdened women may be tempted to omit them. Some programs, such as that of the International Centre for Diarrhoeal Diseases Research, Bangladesh, take preventive services (in this case, tetanus immunization) door-to-door in an effort to increase participation. Others endeavor to arrange convenient clinic locations and hours, often after seeking women's preferences. Mothers are usually responsible for bringing children for immunization and growth monitoring, and it is essential that they know both the rationale for appointments and the dates.

Family planning is an essential child survival technology

Family planning is not only one of the most important women's health interventions; it is also an essential child survival technology. According to some estimates (287), effective use of contraception by high-risk women would prevent 5.6 million infant deaths per year. Spacing births at least two years apart would reduce infant mortality by 10 percent, while concentration of births in the 20 to 34 age group would prevent 5 percent. Prevention of childbearing after three births would cut 3 percent of infant deaths. Birth postponement and spacing free women's time for education, which significantly improves chances for child survival. It allows parents to focus on children's well-being as well as on the number of children. While family planning policies and delivery modes must be locally decided, it is clear that some effort to improve birth timing and spacing is highly desirable for the sake of the children as well as for the sake of families.

WATER PROGRAMS SHOULD BUILD ON WOMEN'S EXPERTISE

An improved water supply benefits both women and children and may be one of the most important technologies for primary health care (066, p. 141). Health benefits for children are both direct and indirect—direct because many diseases are either waterborne or washed (see Chapter 2), and indirect because reduction of water-carrying frees women's time for other essential health-related tasks. Improved water systems also benefit women by reducing exposure to malaria, schistosomiasis, and other diseases frequently transmitted at rivers and water holes. Needs assessment surveys based on discussions with men rarely give high priority to household water supply, whereas the reverse usually occurs when women are consulted.

Women involved with water on a daily basis from an early age have great expertise on its sources and availability.

> For example in the Surigao rural water supply project in the Philippines, women told the engineers the short-cut trail leading the spring source to the village. The engineers found that the amount of pipes and fittings requested

Nomadic women of Kenya bring their children to the clinic to be vaccinated. ICEF 7620/Clark.

originally for ll systems could be used to extend service to eight more villages. In Panama, women took the engineers to a fresh water source on the shore of the island which had not been found during the feasibility survey (420, p. 9).

Women should be trained in maintenance

It has been estimated that 50 percent of improved water systems worldwide are not in use—because of breakdowns, shortage of fuel for diesel pumps, or cultural inappropriateness. In many countries, women are likely to be more knowledgeable than men about pump breakdowns and well defects and more concerned about maintenance. (When the system stops functioning, they are the ones who will have to bear extra burdens.) Women should, therefore, be trained to recognize problems and carry out basic maintenance and repairs.

In Bangladesh, for example, women tubewell caretakers were trained to do preventive maintenance as well as some repair work. A survey (420, p. l2) found that they performed maintenance just as well as men and that they kept pump areas cleaner. They did, however, depend on men to buy spare parts, since men do most shopping in Bangladesh. In Thailand, 480 women handpump caretakers in l0l villages have been trained. In Angola, where women have been recruited as water source monitors, the breakdown rate has markedly declined. Elsewhere, though, men are more commonly put in charge of maintenance.

Water systems should use simple technologies

From the outset, inexpensive, simple interventions using locally available materials should be considered before more "modern" non-traditional methods are introduced. This is particularly relevant in regard to women, because studies show that technological innovations are frequently taken over by men. For example, the provision of soap, hand basins, and adequate carrying and storage containers—a top for a jar—may be more relevant than more sophisticated technologies. In many cases, the most appropriate strategy in regard to water may be the improvement of existing water sources. In all cases, it is important that beneficial current practices are not rejected. For example, traditional methods for purifying drinking water—the use of porous jars, rice husks, and coconut filters—are sometimes discontinued in the mistaken belief that the water from the modern well is automatically safe. Other examples of appropriate small-scale facilities include:

- rainwater catchment on roofs, cement jars for rainwater collection, and conservation tanks for water collection, especially for schools and nursey schools;
- pottery jars with sand and charcoal as water filters;
- shelves to bring the levels of collection vessels closer to water taps to avoid spillage and wastage; and
- pump handles of the correct height and length so that women and children can use them without damage to the pumps, injury to themselves, or unnecessary expenditure of energy.

Box l5: QUESTIONS ABOUT WATER PROJECTS

The following types of information need to be collected to establish the extent of women's involvement (if any) in a water project.

- Are there women sitting on the existing village water committee or its equivalent? If so, what is the percentage of women and what role do they play?
- Are women consulted on the choice of technology, the selection of well sites or pump sites? Are they consulted on additional facilities such as washing or bathing facilities?
- Are women involved in construction? If so, what is the percentage of women's labor input in construction? Do women contribute in other ways, i.e., food, laundry, etc.?
- Are women given training in the maintenance of water supply facilities? If so, what is the percentage of women trained as preventive maintenance workers/caretakers/managers of the facilities?
- Are women trained as health/hygiene educators? If so, what is the percentage of women trained, as compared to men? What is the relative impact made by trained men and women? A further survey could be done to check the turnover rate of trained women as compared to trained men.

Source: 420, pp. 11–l2.

Educational messages should reach women

Women, as the drawers of water, control to a great extent the possibility of water contamination through the manner in which they use the water supply installation. For example, in the case of open wells, which are an improper but common water source, the use of a clean bucket and the prevention of spilled water running back into the well depend upon the actions of the women. In the prevention of guinea worm transmission, care must be taken that water does not run back into the well after coming into contact with infected hands and feet. Women, as water carriers, are also likely to determine the way in which water is stored.

Women can help adapt systems to local needs and preferences

Continuous participatory evaluation can be very helpful in improving the use and effectiveness of water systems. One example concerns the use of water for purposes other than drinking and cooking. Planners

may design systems just for these purposes but find that people use them also for bathing and laundry. This can pollute the water and create stagnant, larvae-infested pools. In one survey of rural water use patterns in Bangladesh, rural women were found to prefer the village pond to piped water because it afforded more privacy for bathing and washing. Water use at pumps increased when the pumps were screened from public view. Ponds may also be preferred for water supply because of queues at pumps. Although it is not always clear how to resolve such problems, health education alone is generally not the answer.

Finally, new water systems may not reduce women's burdens or free time for other activities if the cultural context is not fully considered. Some women may prefer to walk long distances for water, at least some of the time, because it is their only opportunity to be alone or with friends. In one Indian community, women resisted a plan to pipe water into each housing compound because it would deny them a trip to the village well, their one legitimate opportunity for meeting friends (003, p. 75). A study of 12 projects in Kenya showed that the women who got their water from communal points were spending as much time each day as they did when they collected water from natural sources. Water taps often mean that people use more water, which means that women must collect more. In Guatemala, improved water systems reduced the distance women had to go for water but increased the number of trips they made, because they began to do their laundry at home using hauled water, rather than at the river. Another study found that women received less assistance from other family members in fetching water after supplies were brought closer to home.

SANITATION FACILITIES MUST BE CULTURALLY APPROPRIATE

While improved sanitary facilities benefit everyone, women may be more keen for them because they care for children and require greater privacy for themselves. A survey in Bangladesh (420, p. 7) found that most latrine users were female.

Women's groups in many parts of the world have helped with latrine construction and general sanitation. In Tonga, for example, a women's cooperative cleaned up residential compounds and designed toilet facilities for their own homes. Eventually the group began raising money by building and selling toilet units and teaching the construction method to interested groups. In India, women's credit cooperatives pool resources for latrine construction by collecting small individual contributions and awarding the pot to participants one by one in rotation.

Sanitary latrines constructed in many parts of the world are often not used because of their cultural inappropriateness. In one Central American country, for example, women refused to use latrines because they were not considered private. (Users' feet showed beneath the walls.) In many places, children defecate just outside latrines because they are afraid of falling through the large opening. In some countries, women and men cannot use the same latrines. Women can alert planners to these problems, although they are likely to be more candid to women and others whom they trust. Unfortunately for managers, however, health education is not an effective remedy for cultural inappropriateness, and more significant changes are usually required.

Women, as major water users, should participate in planning and maintaining new systems. ICEF 8629/ Wolff.

Chart 5: PROVISIONS TO SUPPORT MOTHERS IN THE WORKFORCE

Country	*Maternity Leave Policy*	*Provision for Nurseries/ Creches*	*Nursing Breaks*
Brazil		Based on the number of women they employ, employers are required to provide creches and facilities for nursing. In some states, these employers must register with the Federal Department of Labor, and the worksite creches are inspected.	30 minutes twice a day for 6 months; can be extended
Honduras	4 weeks before delivery and 6 weeks after. Job must be held open during leave. Full salary is paid by the Honduran Social Security Institute, the employer, or both. (No worker can be fired because of pregnancy.)	The Ministry of Labor and Social Welfare runs 9 nurseries for children 3 months to 6 years old. These nurseries are primarily for children of low-income working mothers. Over 1,000 children are enrolled. Employers are also asked to provide a suitable place for women to nurse their infants. Employers may contract with the government to provide this facility.	30 minutes twice a day for 6 months. Time is counted as time worked.
Mozambique	2 months. Full salary is paid.	Nurseries are provided by the government at large worksites (factories). Daycare centers are provided for children age 2–6 years.	30 minutes twice a day for 6 months. Time is counted as time worked.
Tunisia	4 weeks after delivery. Leave can be extended another 4 weeks with a doctor's certificate. Full salary is paid.	Businesses employing more than 50 women must provide a nursing room.	2 hours per day for six months; 1 hour per day for the next year.
Papua New Guinea	6 weeks before birth and 6 weeks after delivery.		30 minutes twice a day. Time is counted as time worked.

Source: *Mothers and Children*, vol. 3, no. 3.

CHILDCARE IS AN ESSENTIAL PRIMARY HEALTH CARE ELEMENT

Primary health care programs typically include no provisions for childcare, yet it is clear that clinics and workers will have to deal with resulting problems. Health workers should be particularly concerned about:

- feeding arrangements, especially for infants and weaning-age children,
- sanitation facilities,
- disease transmission,
- immunization coverage,
- the caregiver's ability to treat or refer diarrhea and other diseases, and
- water supply systems.

Ideal arrangements, or even ones meeting minimal health standards, are often unlikely, given the poverty of many participants.

Employers and governments rarely make adequate provision for childcare despite of legal requirements and officially stated policies. (See Chart 5 and 002.) Though Chile has a national commitment to children's services, only 12.3 percent of children under six were reached in 1976. Brazil's Labor Law of 1943 requires employers of more than 30 women to provide nurseries, but facilities may be distant from the worksite, the law pertains only to the infant's first six months, and penalties for non-compliance are miniscule. Out of 150,000 businesses in Sao Paulo, only 33 provided daycare in the late 1970s (299, p. 23). Recent information indicates that enforcement is improving, however (171). Fewer than 1.6 percent of women in one Asian country are protected by legal requirements for maternity leave and

A nationwide network of day care centers is being developed in Ghana. ICEF 5983/Matheson.

breastfeeding support (414, p. 13), either because they work in the informal wage sector or because laws are not enforced. Laws may even work against women if they discourage employers from hiring and retaining them.

A recent review of childcare arrangements in six developing countries (010) included recommendations for governments and women's groups:

- Examine childcare needs.
- Identify children most at risk.
- Incorporate childcare into the overall scheme for health promotion.
- Create policy and enforce existing childcare legislation.
- Train women for leadership positions.
- Develop programs for such special needs as those arising from seasonal work, industrial employment, and short-term training programs.
- Develop decentralized, flexible, childcare support which draws on human and material resources and is controlled by the community and the parents.

WHO has developed a framework for country-level studies on this topic.

Organized childcare may take many forms, ranging from home-based care of one to six infants to significantly larger centers at industrial worksites.

- In Brazil, for example, home-based daycare is provided by community mothers and paid for by the Social Services Department. Mothers are trained in child feeding, personal hygiene, environmental hygiene, educational activities, immunizations, and medical services available for children.
- In Senegal, village mothers, assisted by development workers and community volunteers, run a daycare center during the planting season. Fees are paid both in cash and food. Women working in the center learn about nutrition, hygiene, disease prevention, and sanitation. All children are vaccinated and basic drugs for malaria and conjunctivitis are available.
- In Jamaica, one project arranges for the children of working mothers to be minded in the community homes of the elderly. Some provide this service free of charge.
- In India, mobile creches have been organized at construction sites in Delhi and Bombay. Over 4,500 children are cared for in 53 locations. Mothers pay a small monthly fee and come in once or twice daily to breastfeed. Preschool children receive food, and a physician visits the center once a week.
- On site "salas-cunas", or creches, are also required of those employing more than 50 women in Brazil, 30 women in Costa Rica, Guatemala, and Venezuela, and 20 women in Chile and Honduras (073, p. 10).

Improved childcare is an important objective of WHO's Women in Health and Development Program in Africa. In Sri Lanka, UNICEF has assisted in training staff and developing a health manual for creches on tea planations. Governments in Trinidad and Peru reportedly encourage men to go to day care centers and learn about housework (328, p. 149).

Box 16: DAYCARE IN INDIA AND MEXICO

Many women's groups have started daycare facilities for their members. In the state of Kerala, India, for example, clubs have built bamboo and thatch "balwadis" in about half of the villages and rural districts.

> These balwadis are staffed by mothers under the supervision of a local woman whom they select for basic training in home sciences, agriculture, nutrition and child health. Professional social workers oversee the 1,601 balwadis scattered throughout Kerala.
>
> The balwadis are not just a place for mothers to leave their children during the day; they are focal points in community development. Mothers help prepare food supplements and a balanced diet for their children in the balwadi kitchen. The great importance of breast feeding is explained, as well as how mothers can prepare the baby's first solid food from mixtures of local produce (most Keralans are vegetarians), some of which may be grown in demonstration gardens attached to the centre.
>
> Each balwadi has—or soon will have—a latrine, something that rural Indians have been slow to accept as a health necessity. A health worker makes regular visits to examine children and pregnant women.

Similarly, in Mexico:

> The programs of the Institute for Child Protection . . . combine the state's economic support with volunteer work by women in child-care centers, nursery schools, kindergartens, and centers for rehabilitation and health care. The Institute offers courses in such subjects as family planning, budgeting, production and consumption of foodstuffs, and health care, and it provides up-to-date information on educational and job opportunities, legal and civil rights, and social security (331, p. 51).

CHAPTER 7

Reducing Women's Burdens and Improving Their Status

In some ways, the most important things that need to be done for women's and children's health lie beyond primary health care. These include the reduction of women's work loads, the freeing up of time for self-development and for health activities, increases in women's income and education, and general improvement in women's status. Steps are also needed to ensure that related development activities, especially in agriculture and industry, assist rather than retard women's well-being. These are essential child survival activities because research shows that womens' own health, status, and activities are prime determinants of their children's health. They are also desirable in their own right.

Women in seclusion may have more difficulty securing health care for themselves and their children. WHO 18453/Khan.

FREE WOMEN'S TIME FOR HEALTH ACTIVITIES AND PERSONAL DEVELOPMENT

Measures to reduce women's work loads, identified by a conference in Lagos (128, pp. 22–3), may include the following:

- arranging for a mother or girl to take care of the children of a group of families during the agricultural working day (village daycare group);
- increasing water points, wells, and general distribution facilities;
- reforestation of land near villages with fast-growing trees for fuel;
- introducing light transport facilities such as carts for crops, water, and wood;
- making available equipment for fishing and fish processing;
- providing communities with light machinery for grinding millet and grain;
- introducing improved, but cheap, cooking and household utensils and equipment;
- developing efficient agricultural tools; and
- sharing of duties among men, women, and children, even if this means going against the traditional division of labor.

Most of these activities lie beyond the health sector, as usually defined, but clearly support health.

ENSURE THAT TECHNOLOGIES ARE TRULY APPROPRIATE

UNICEF and others are supporting a number of innovative activities to help women use time more efficiently. These include (128, p. 26):

- improvement of traditional methods of crop drying and storage to reduce losses in quality and quantity which in some instances run as high as 30 percent;
- development of manually operated cereal and legume grinders and millet threshers;
- use of wind and water power for pumping water, grinding cereals and legumes, and for small-scale production of electricity for charging batteries;
- improvement of cooking arrangements to reduce fuel consumption and dangers to children;
- study of ways to utilize solar radiation for heating and purifying water, cooking food, and drying crops and food; and
- development of manually operated oil extraction presses to enable communities to extract oil from locally produced oil seeds.

In Burkina Faso, UNICEF provided women's groups with, among other things, energy efficient carts and mills for grinding millet. The mills save women three hours of labor every day, while the carts save both time and energy used in transporting water, firewood, and agricultural products (053, p. 72). In the Dominican Republic, UNICEF supported training of 286 women in the construction of more efficient stoves using local materials.

While health and development managers should look for appropriate technology, as suggested above, they must also be aware of several common pitfalls. A great deal of the intermediate technology introduced in the past has been less appropriate than its sponsors have assumed, and some of it has actually harmed women. Following the "trickle-down" (or "trickle sideways") theory of development, most groups have looked first for technologies to increase men's productive roles. The assumption has been that increased family income would benefit the entire household, whereas in fact, many men have used their new income for other purposes. Women have sometimes had to do additional work because new technologies have covered only part of the production process. In Zaire, for example, agencies helped men develop chicken farms, not realizing that women would have to spend several additional hours per day carrying water for the chickens.

An obvious solution is to develop technologies that cover all production phases, including women's roles, but this, too, has its problems. Outsiders often assume that all technologies other than those for cooking should be taught to men. Even those technologies specifically intended for women may be taken out of their hands if men sense an opportunity to earn money or status. Women who once earned income from their role in the production process may actually lose both income and status as a result.

- In Bangladesh, for example, the increasing use of rice mills and parboiling and drying equipment have deprived many poor women of a traditional source of income (235, p. 48).

- Also in Bangladesh, the introduction of methane stoves that burned cow dung had a devastating effect on landless people who used to freely collect dung from people's property (251).

Another major problem with appropriate technology has been that it has not always been truly appropriate, especially in a cultural sense. The introduction of solar-powered stoves in places where women cook before sunrise or after dark is a commonly cited example. In Gambia, chickens introduced to help women generate income were unsuitable for rural areas and were mostly sacrificed for food. A further problem with at least some efforts to reduce women's time burdens has been that men sometimes give them other work to fill their "extra" time.

The most obvious lesson from these experiences is that development managers need to know local women and involve them in all phases of technology design, selection, and testing. In some cases, health workers may be more knowledgeable than other development workers and should represent their interests.

HELP WOMEN TO INCREASE THEIR INCOME

Giving women access to credit and specific job-related skills may be one of the best ways to reduce fertility and to improve other health status indicators. Along with education, income generation opens new opportunities to women beyond childbearing and gives women access to new ideas and better food supply.

In the context of their work with women's groups, health managers can introduce a number of innovations:

- provide small revolving funds for community projects and income-generating activities,
- help women devise their own means of raising cash,
- provide technical support (product design, appropriate technology, marketing) for income-generating activities, or
- help women develop job skills.

The Joint WHO/UNICEF Nutrition Support Program (JNSP) specifically supports efforts to increase women's productivity and income, including improved childcare.

> Examples include projects in Thailand and Sri Lanka where high-protein food is processed for children in low-income areas; in the Dominican Republic where community vegetable garden projects combine nutrition concerns with vegetable marketing; in Botswana where sorghum grain is pounded into flour for school feeding programs; and in Paraguay where nutrition education projects are linked to production activities. In all cases women are able to generate income from these activities (346, p. 13).

Income-generating activities can be interwoven with health education and other services.

Given the opportunity, women can become more productive. ICEF 6894/Warr.

• In the Republic of Korea, for example, UNICEF trained mothers "to find paid employment as part-time house-helpers. The training covered a broad range of topics linked with hygiene, nutrition and other health-related concerns. . ." (334, p. 9).

• In Burkina Faso, UNESCO trained women's communal groups to grow soybeans as a cash crop. Proceeds were used to buy medicine for the village dispensary (102, p. 72).

• In Senegal, the government-sponsored integrated rural development programs have assisted women to organize themselves and grow vegetables. Women contributed membership fees to form garden groups. This provided a basic capital fund to be used to dig wells and build fences and roads. Women grew vegetables on individual plots in the collective garden. This brought them increased income. In some villages, women initiated health and social service facilities. One garden group donated money to build a village maternity center (420, p. 4).

• In Indonesia, in cooperation with the Family Welfare Movement, UNICEF is supporting an income-generating/family welfare program for rural families in 13 provinces, providing assistance in management, skills training, cash grants, raw materials and marketing facilities (346, p. 15).

• UNICEF also gives some support to programs such as construction skills training in Zimbabwe; well pump and pipe maintenance and repair and production of stoves in Ethiopia and Pakistan; welding and block-making in Swaziland; stone carving and candle-making in Pakistan; and machine assembly, maintenance, and repair in Morocco (346, p. 14).

Even large-scale government programs, such as the Indonesian family planning program, may provide revolving funds for local income-generating activities. All efforts to help women increase their income should ensure adequate childcare arrangements.

Health managers should also attempt to increase women's paid health-sector employment, as outlined in Chapter 4. The assistant director of the Diarrheal Disease Control Program in Bangladesh has pointed out that one advantage of cottage production of oral rehydration salts is that it employs women (195, p. 72).

SUPPORT EDUCATION AND LITERACY PROGRAMS FOR WOMEN

Health managers may be able to directly support women's educational development by:

- publicizing the health benefits of women's education,
- providing simple health education materials for literacy classes, as in Ethiopia and elsewhere, and
- helping illiterate health workers to become literate, as in the Pachod project in India (004, p. 44).

One program in India (Mahbubnagan) linked literacy classes with antenatal care but found that women were too preoccupied with impending motherhood to be interested in literacy.

UNICEF-supported nonformal education projects

> cover functional knowledge of reading, writing and arithmetic; basic information about health, nutrition, child care and household management; and simple skills to help to generate income. Short leadership training sessions are provided for local village women and youth leaders to encourage community participation and collective action. Between 1981 and 1983, 276,000 national personnel, mostly women, were trained in women's education and training, pre-vocational training and in leadership, and 98,000 non-formal institutions received UNICEF inputs (346, p. 17).

PUBLICIZE WOMEN'S ACTIVITIES AND TAKE OTHER STEPS TO RAISE WOMEN'S STATUS

Even beyond education and income, health managers must concern themselves with the social value placed on women and their degree of influence within the family, community, and nation. Men at government, community, and family levels are likely to denigrate women's health and perhaps actively abuse women and girls until they value women's immense productive roles and understand the importance of the family for child survival. Female infanticide in some countries, the subtle starving of girls, beating or even burning of wives—all are likely to continue until females are considered just as important as males. Such equality will not be quickly achieved.

As suggested throughout this paper, health managers can contribute in their own small way by hiring, paying, and promoting women; by publicizing women's essential health roles; and by going out of their way to consult with women before developing new activities. They can work with local women to eradicate such traditional practices as female circumcision, while praising and upgrading the beneficial activities of such traditional female practitioners as birth attendants and healers. They can encourage men to work with women, not only to share the burden but also to better understand women's health contributions. All of these may be minor efforts in the overall picture, but when emulated by other development workers, they add up and will ultimately have a significant impact.

World Bank/Johnson.

Appendix A

RECOMMENDED READINGS AND REFERENCES

Part I. Selected annotated bibliography

001 Carloni, A. *The Impact of Maternal Employment and Income on the Nutritional Status of Children in Rural Areas of Developing Countries: What is known, what is not known, and where the gaps are*. New York: UN Administrative Committee on Coordination, Subcommittee on Nutrition, April, 1984.

This paper reviews the results of approximately 60 studies on relationships between maternal employment and child nutrition. The assertions of both women-in-development and nutrition specialists are tested and largely found to be unsubstantiated by existing evidence. Guidelines for future research are suggested. This paper is recommended reading for any serious researcher on this topic.

002 Clearinghouse on Infant Feeding and Maternal Nutrition. *Government Legislation and Policies to Support Mothers and Breastfeeding, Improve Maternal and Infant Nutrition and Implement a Code of Marketing of Breastmilk Substitutes*. (Report No. 3.) Washington, DC: American Public Health Association, International Health Programs, 1984.

This semi-annual report has information on health-related legislation in over 100 countries. Topics addressed include:
- maternity leave policies,
- provision for employer-supported nurseries and paid breastfeeding breaks, and
- promotional activities including efforts to implement the WHO/UNICEF infant formula code.

Information in each case deals with legal requirements rather than with the degree of enforcement.

003 Dixon, R. *Assessing the Impact of Development Projects on Women*. (A.I.D. Program Evaluation Discussion Paper No. 8.) Washington, DC: U.S. Agency for International Development, May 1980.

This review of USAID development projects sets out to answer the question, "under what conditions are women least likely to be disadvantaged by development projects, both in absolute terms and relative to men?" Documents concerning 32 women-in-development projects, mostly dating from the late 1970s, were examined. Topics considered included participation of women in project decision-making, access of women to project benefits, and project effects on women's status. Impact on women's physical, economic, and social well-being was also assessed.

While limited to reviewing "women-in-development" projects, the paper urges broader study of all development projects and describes a number of broadly applicable lessons learned. This is recommended reading for those concerned with strengthening women's participation as decision-makers and beneficiaries.

004 Favin, M., B. Bradford, and D. Cebula. *Improving Maternal Health in Developing Countries*. Washington, DC: World Federation of Public Health Associations, 1984.

This companion piece to the present paper discusses maternal health in greater detail and includes lengthy descriptions of relevant projects. Like the present paper, it considers several levels of ameliorative action, including general improvements in women's living conditions, better health care delivery in general, and specific maternal health interventions.

This paper analyzes maternal health problems and their broad and specific solutions. It argues that there are no easy solutions: Although simple, low-cost health interventions are available, real improvements in maternal health require significant improvements in women's status, women's education and income, and the health system's overall capabilities. Appendices include project summaries, book annotations, and information on selected program tools such as mothers' cards.

005 Hamilton, S., B. Popkin, and D. Spicer. *Women and Nutrition in Third World Countries*. New York: Praeger Publishers, 1984.

This book provides a painstaking review of research on women's nutritional status and factors affecting it. Research on conditions other than pregnancy and lactation is emphasized. The nutritional effects of primary health care, family planning, and various types of nutrition interventions are also reviewed. Over 700 bibliographic citations accompany the text.

006 International Women's Tribune Centre. *Movitivando la Mujer: El Como, Con Que, Por Que, De Un Projecto*. New York: November 1980.

This Spanish-language manual addresses the needs of designers, implementers, and evaluators of projects involving women. Both formal and participative learning methods are emphasized, along with resources for project funding. Numerous practical training exercises are included.

007 Lopez, A. and L. Ruzicka, eds. *Sex Differentials in Mortality: Trends, Determinants and Consequences*. (Miscellaneous Series, No. 4.) Canberra: Australian National University, Department of Demography, 1983.

This book is a selection of papers presented at an ANU/UN/WHO meeting held in Canberra in December 1981. The meeting itself was part of a series of collaborative investigations by WHO and the UN into various aspects of the mortality situation throughout the world. Focussing on sex differentials in mortality, the meeting brought together experts from a variety of disciplines including genetics, actuarial science, demography, sociology, epidemiology, and other fields of public health.

The authors examine the causes of higher female than male mortality at almost all ages in some developing countries; however, because of a lack of data, they rely mostly on descriptive accounts of sociocultural practices. Two sections of the book are devoted to the social and demographic implications and the economic consequences of sex differentials in mortality, while a third section discusses the public health aspects of these differences.

008 McLean, S. and S. Graham, eds. *Female Circumcision, Excision, and Infibulation: The facts and proposals for change*. Report No. 47, revised edition. London: Minority Rights Group, 1983.

This is a concise yet comprehensive report on the tradition of female circumcison. The first half addresses the physical, psychological, legal, historical, and political aspects of the issue, including a review of discussions and actions at national and international levels. The second half is devoted to the views of women experts from Senegal, Somalia, Burkina Faso, Egypt, Kenya, Nigeria, Benin, and Sudan. These women's experiences provide valuable lessons on establishing practical programs to eradicate the customs of circumcision, excision, and infibulation.

009 Nturibi, D. *Planning and Management of Community Projects*. Nairobi: International Planned Parenthood Federation, Africa Region, January 1983.

This manual was prepared for training courses offered by the Planned Parenthood and Women's Development unit of the Africa office of the International Planned Parenthood Federation. It reviews the rationale for linking income-generating and other women-in-development activities with family planning and describes the planning, management, and evaluation steps needed to make them successful.

010 Overseas Education Fund. *Child Care Needs of Low Income Mothers in Less Developed DEF Countries: A summary report of research in six countries in Asia and Latin America*. Washington, DC: Overseas Education Fund, September 1979.

This report summarizes a study on the childcare needs of low income mothers in six less developed countries. The purpose of the study was to determine the extent to which childcare responsibilities prevent women's participation in income generation activities and to understand how childcare patterns affect health and nutrition. Data were analyzed from field research in Korea, Malaysia, Sri Lanka, Brazil, the Dominican Republic, and Peru.

Less than 1 percent of the low income women interviewed use existing childcare facilities, preschools, creches, or nurseries. However, where women knew of these services, they usually preferred them due to the educational "headstart" for their children. The fee for care, distance from work and/or home, and unfamiliarity with the concept of childcare outside of the home, kept women from using these programs. Hence, the women interviewed remain heavily dependent on family members for childcare.

011 Pan American Health Organization. *La Salud de la Mujer en las Americas* (Publicacion Cientifica No. 488) Washington, DC: 1985.

This volume of statistics and explanatory text covers many aspects of women's health in Latin America. In addition to detailed analysis of morbidity and mortality differentials, the report examines such correlated factors as women's educational levels, legal status, and reproductive health. Both vital statistics and results of scientific research and surveys are presented. Both Spanish and English versions are available.

012 Roessel, C. and M. Favin. *Maternal Nutrition*. Washington, DC: World Federation of Public Health Associations, July 1983.

This resources guide in the Information for Action series reviews 15 articles relating to maternal nutrition problems and interventions. Many additional articles are listed for further reference.

013 Royston, E. "The Prevalence of Nutritional Anemia in Women in Developing Countries: A critical review of available information." *World Health Statistics Quarterly* (35-2) 1982: 52–91.

This review article summarizes the results of several hundred studies and technical reports on the causes, results and prevalence of iron deficiency anemia.

014 United Nations. *The State of the World's Women 1985*. Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, Kenya, July 15-26, 1985. New York: 1985.

This compendium of information and analyses on women was prepared for the 1985 World Conference to Review and Appraise the Achievements of the United Nations Decade for Women. Subjects covered include the family, agriculture, health, industrialization, education, and politics.

015 U.S. Department of Commerce, Bureau of the Census. *Women of the World*. A Five-book Series. Washington, DC: 1984-85.

Statistical data and analysis on women in 87 developing countries are presented in a series of four regional handbooks for Asia and the Pacific, Near East and North Africa, Latin America and the Caribbean, and Sub-Saharan Africa. Information gathered between 1960 and 1980 from national census and survey data is presented in charts and discussed. Topics include population distribution and change, literacy and education, women in economic activity, marital status and living arrangements, and fertility and mortality. These data serve as a useful tool for monitoring changes in the status of women and for facilitating their full participation in national development.

The fifth publication is a Chartbook which summarizes the information presented in the regional handbooks. It discusses the global impact of such developments as rural-urban migration, rising literacy rates, gender differences in infant mortality, and labor-force participation.

A limited number of the first four handbooks in the *Women of the World* series are available for international distribution free of charge. Write to: Center for International Research, Bureau of the Census, Washington, DC 20233, USA.

016 World Health Organization. Family Health Division. *Health and the Status of Women*. (FHE/80.1.) Geneva: 1980.

This publication presents an excellent overview of women's health in the context of women's roles and status in society. It attempts to show how social customs and attitudes affect women's nutritional and health status and their access to health care; how their economic and educational levels affect their own health and that of their children; how changing family patterns and women's roles affect health; and how women's health affects their status and participation in development. Women's health problems related to nutrition, fertility, and infection are described, and both health and broader interventions are suggested.

017 World Health Organization and the Pan American Health Organization. "Report of the Technical Working Group on the Participation of Organizations Related to Women in Primary Health Care Activities, April 1983, Washington, DC. Vol. II: Guidelines for incorporating women into primary health care programs." Washington, DC: April, 1983.

This useful paper illustrates ways in which national ministries of health can work with women's groups to strengthen primary health care. Discussion is presented in terms of three different organizational types, namely:

- self-help or self-starting organizations,
- intermediary organizations, and
- governmental organizations and entities.

In each case, numerous examples are given of field experiences. While certain assumptions about women may apply only to Latin Americans, this document should, nevertheless, be useful worldwide.

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Appendix B

HEALTH PROJECTS EMPHASIZING WOMEN

BANGLADESH/Aga Khan Community Health Programme, Dhaka

This project, which began in 1984, is unusual for the degree of recognition it gives to women as "the center of the family... and the one who carries the major responsibility of raising the children." This is neither a "women's project" nor primary health care with a special women's component. Rather, it is a routine primary health care activity that makes unusually full use of women's skills and resources.

The community health workers are the principal agents of change and constitute the major "women's action" group. As members of their own communities, they have a better understanding of the cultural norms, values, and practices of their people; they are more readily accepted, especially by other women, and provide role models for other women and their children. By selecting respected and active local women, many of whom are mothers, effective "peer-to-peer" interaction and education on better health practices takes place. Other mothers see and emulate these "trained" mothers monitoring the growth of their children, changing their nutrition practices, having their children immunized, breastfeeding frequently, weaning properly, and practicing good hygiene. Every effort is made, with the help of leaders and through an incentives system, to continually promote the performance and the status of the community health workers in her community (022, p. 7).

INDIA/Community Health Development Programme, Kottar Social Service Society, Tamil Nadu.

The Community Health Development Program (CHDP) of the Kottar Social Service Society covers 107 villages of Kanyakumari District, Tamil Nadu. Initially, the program concentrated on providing MCH services along with food distribution. After a period of questioning, the priority was shifted to educating women on economic and social issues. Instead of providing services, it was felt that the women should be organized to demand these services from the government themselves.

Working in this direction led to the women "flooding the government primary health centres to get their children vaccinated." The much surprised health authorities then decided to collaborate with the staff of CHDP to provide the health services in their villages. This experience gave the women confidence in their power as an organized group. The women went further, to take up other issues which affected them.

One such issue was that of drinking water.

> In one village there were no proper facilities for drinking water. The committee of the women's club went several times to the Panchayat union office but this effort proved to be a waste of time and money. So they decided to go in large numbers to make their demands for drinking water, this time carrying their earthenware water pots. But as always the Panchayat office did not look concerned. So the women broke their pots in the office and returned home. This dramatic gesture had its effect. Within two weeks the Panchayat Officers came to the village to discuss the problem and before the end of the month, a drinking water pump was installed in the village. The men of the village could not believe their eyes because they had long given up the issue as impossible and unrealizable!

One of the latest issues taken up is that of providing adequate food grains at fair prices. For this, the women's group linked up with others in the district and organized a procession, several kilometers in length. This is the beginning of a women's movement in the area (308, p. 16).

INDIA/Integrated Child Development Services (ICDS)

The ICDS program began in 1975 as an experiment in 33 administrative 'blocks' in India. Initiated by the Ministry of Social Welfare, this program aims to deliver an integrated package of services to preschool children and women 15 to 44. The package includes supplementary nutrition, immunizations, health check-ups, referral services, nutrition and health education, and nonformal education.

The focal point of these services is the "anganwadi"—literally, a courtyard for childcare—run by a female worker coordinating all activities, including pre-school games, feeding schedules, and health and nutrition education classes for mothers. The anganwadi worker, usually an unmarried girl with a minimum of nine years of schooling, is recruited from the community and trained for several months. She and the village health guides are the people's primary link with the health centers and other social services for young children.

The State of the World's Children 1985, published by UNICEF, reports that in the past ten years, the ICDS program has expanded to cover some 10 million children and 3.4 million mothers in 1,000 blocks containing some of India's poorest villages and slums. The 60,000 anganwadi workers trained thus far have worked to double and even triple immunization rates in some blocks.

> A survey of children in 15 of the original project blocks has shown that severe malnutrition fell from 21.9 percent to 5.4 percent over 21 months. Among children under three, usually the hardest group to reach, malnutrition fell from 29.2 percent to 6 percent. Even though the children in rural ICDS blocks are among the most deprived in the country, their infant mortality rate is steadily falling: a study of 200 ICDS blocks found an infant mortality rate in 1982–83 of 89 deaths per 1,000 live births in rural blocks as compared with the national figure of 124 per 1,000 in rural areas (153, p. 8).

By bringing together a number of health, education, and social services, anganwadis have achieved remarkable improvements in child health.

The ICDS program generally sees most women as mothers and providers of health care rather than as beneficiaries or participants in the organization and operation of the anganwadi because children are the primary target for services. Therefore, the women who benefit most directly, an unintended effect of the program, are the anganwadi workers. Their training and their ability to earn an income may enhance their social status, social mobility, and self-esteem. Later, as mothers, wives, health workers, and possibly community leaders, these women will be an example to others and thereby promote lasting improvements in the community's health status and habits.

INDIA/Jamkhed Comprehensive Rural Health Project

The Jamkhed Comprehensive Rural Health Project is a pioneering effort to provide health care to the rural poor. From its start in 1971, the founders insisted that the project rely only on the community's needs and resources to guide activities. Now the project covers 70 villages with more than 100,000 people. Infant mortality has declined from about 200 to 50 per 1,000. Malnutrition has been reduced from 30 to 8 percent. Family planning has been widely accepted and the

birth rate halved to 20 births per 1,000 persons. And program activities have expanded beyond health into agriculture, water supplies, nutrition, and education.

These striking improvements in the community's health status are due in great part to the effectiveness of the village health workers (VHWs) appointed to keep a close watch on the health situation in their villages. Although VHWs work only part-time, their familiarity and daily contact with villagers are a vital link between the community and the professional health team.

Each village selects a volunteer as its VHW, preferably a married, middle-aged woman experienced in bearing and raising children. Basic education is not considered in the selection, so the woman is often illiterate. It is more important that she 'belong' to and have roots in the village in the form of a house or a field. Care is taken that the community does not select a figurehead or the wife of a village leader, for the people from every socioeconomic level must be able to trust her and she must be able to shed caste differences to enter any house in the village. She must also have a genuine concern for people and a willingness to change herself and change others. Young unmarried girls are not recruited.

Originally, the project tried to place several auxiliary nurse midwives in the villages. But they were difficult to recruit to remote rural areas and those available were ineffective because they had no rapport with the community. Training local women, an experiment at first, has proven far more effective in providing continuous primary health care.

The training itself is geared in such a way that the women do not spend a long time away from their home and village. During the one-week orientation program at the Jamkhed center, they are introduced briefly to the project's health priorities: simple curative services, care for children under five, maternal care, family planning, control of tuberculosis and leprosy, and blindness prevention. The emphasis is on health education and prevention, but they are also taught the use of a few drugs and the treatment of minor illnesses. Their primary functions are early detection, early referral, good follow-up, and teaching good health habits.

They return to the center two half-days per week from then on to learn from cases they have encountered and from cases at the center. This ongoing training is supplemented by weekly visits from a mobile health team which provides important social and professional support and also acts as a source of consultation and referral. Together, the VHW and the health team can manage 80 percent of the health problems at the village level.

A key factor in VHW training is the emphasis on social responsibility and sensitivity. When the VHWs first join the program, they are very caste-conscious. As classes continue, however, they overcome this feeling and soon Brahmins and Harijans cook for each other, eat together, and live together. The breakdown of social barriers triggers a process of change in these women's health attitudes and practices. Within a few months, they become keen promoters of change in their villages. Also, since all training and travel costs are borne by the health center, VHWs are not under obligation to the village leaders and, therefore, feel freer to advocate change.

VHWs speak at village meetings where previously women did not even attend; they enter high caste houses and talk about harmful practices and taboos; and they share their new knowledge with fellow villagers and their experiences in the village with the health team, helping to overcome both previously unquestioned beliefs and customs.

These women also receive much support from the community through farmers clubs and women's clubs (mahila mandals) which have emerged since the Health Project began. Club members are involved in many health activities: they grow food for and organize the preschoolers' nutrition program; help the VHW in weighing children each month; organize immunization campaigns; assist in the rehabilitation of leprosy and tuberculosis patients; and volunteer for the non-technical chores in mass treatment camps, such as eye camps, tubectomy camps, and camps for handicapped children.

Nonformal education programs and creches conducted by VHWs and mahila mandal members allow women and older children to attend classes in functional literacy and other skills basic to increase the income of poor families. Some VHWs have themselves become literate and no longer depend on a son or relative to complete health records.

INDIA/Mobile Creches

Mobile creches for working mothers' children began in tents 11 years ago in Delhi and Bombay, India. Now the organization cares for 4,540 children at 53 sites. Children up to 12 years old receive basic care, simple hygiene, recreational activities, regular medical attention, and feeding. Different age groups now participate in literacy and creative educational programs. Classes in nutrition, hygiene, adult literacy, and vocational skills are provided through the creches. Community needs and available resources, financial and personnel, determine the function of any one creche. Creche workers are from the local communities and receive small salaries.

These programs have evolved slowly and have developed community trust by evaluating community needs, finances, and available human resources (010, pp. 62–63).

Valuable skills are shared among mothers' club members. ICEF 4002/Holton.

KOREA/Family Planning Mothers' Clubs

Beginning in 1968, the Planned Parenthood Federation of Korea (PPFK) organized "family planning mothers' clubs" following a pattern of informal self-help groups well established in Korean villages. The original objective of these voluntary organizations was to serve as the major channel for the diffusion of family planning and oral contraceptives among village women. Trained country supervisors and provinical branch officers provided the necessary organization and financial support for the program to gain its start. As the credibility and acceptance of the clubs increased, so did the membership. Clubs soon became self-supporting through the establishment of mothers' banks.

The mothers' clubs proved to be the perfect vehicle for reaching women beyond the established scope and coverage of existing programs. When many clubs reported marked increases in family planning practices, program supervisors began to coordinate with the government's local health workers to promote mother and child health in the clubs.

The scope of work conducted by the mothers' clubs expanded again in 1972 under the encouragement of the Saemaul ("new village") Movement. The family planning mothers' clubs joined with other women's groups to form the Saemaul Women's Association. In addition to gaining strength through stronger support and greater numbers, this movement reduced the amount of service duplication. From this basis, the association's activities expanded to include other community development efforts such as sanitation, family health, nutrition, childcare, money-raising projects, and cooperative agricultural projects. Contributions to village development and notable accomplishments of the mothers' clubs began to soften the initial opposition by men. Women began to become increasingly aware of their potential capabilities.

There are now about 65,000 community organizations operating at the village level. Each club has an average of 40 members between 20 and 45 years old. Success and activity rates vary but generally rural clubs are more successful. Family planning continues to be the primary activity and the Planned Parenthood Federation of Korea remains the clubs' major source for literature, advice, and training courses.

Based upon their personal relationships as friends and neighbors, club leaders and members have worked to raise women's status and expand their role in the development of male-dominated rural communities. Mothers clubs are playing an increasingly important role in coordinating community participation in family planning and primary health care activities.

NIGER/Animation Feminine

Niger began experimenting with methods to redirect health care from tertiary toward primary rural health care in 1963. It was not until 1968, however, that the village health team strategy was undertaken. The initiation and success of the health team strategy are due to the contributions made by "the women's animation program."

Animation Feminine or "the women's animation program" is an organization formed to improve the understanding and awareness of villagers regarding their health status. Village women gathered for meetings to discuss what they felt were their greatest health needs and their perceptions of disease and illness. The greatest health needs expressed were for improved drug supply and the training of traditional birth attendants. In response to this need, *Animation Feminine* designed a village health team strategy, envisioning the training of women to dispense drugs and to use hygienic procedures in child delivery.

The team strategy was adopted in 1968 with two pilot projects. The selection of village health workers, however, was limited to males. These VHWs were initially trained in sanitation education and instructed to educate the villagers in sanitary practices. Less than six months later, the VHWs were retrained in first aid and medicine dispensing due to high demand for such practices by *Animation Feminine*.

Throughout the developmental stages of the pilot projects, the village health worker and *Animation Feminine* remained two separate entities, though their interrelationships contributed greatly to the success of the program. *Animation Feminine* played a major role in increasing the villagers awareness of their health status. They worked with the villagers in the selection and training of VHWs and provided supervision of activities such as malaria control programs. Lastly, the Animation service conducted evaluations of VHWs.

In addition to the training, supervision, and evaluation of VHWs, *Animation Feminine* carried out other tasks that greatly improved the health status of women in the villages. Most impressive was their training and supervision of traditional birth attendants (TBAs). TBAs were trained in hygiene and early referral for high-risk pregnancies. They also encouraged mothers to bring their children for malaria control and the children's nutrition program.

NIGERIA/Fathers' Clubs

Having discovered that most decisions regarding children's health are made by fathers, the Nigerian Institute of Child Health decided to organize Fathers' Clubs to educate and motivate the fathers. Prior to the initiation of Fathers' Clubs, health education consisted of instructions given to mothers at clinics and during home visits. Unfortunately, the women needed permission from their husbands to attend the clinic classes and/or to spend money on health care. Many mothers were not able to go because the husbands did not understand the need or want to spend the money. Instead they were buying potentially dangerous remedies from the pharmacist without prescriptions. Much money was also spent on powdered milk for bottlefeeding and vitamins.

Fathers' Clubs were designed to resolve this problem. Fathers of children attending these clinics are invited, along with prominent men of the community. Each club elects officers, votes on topics to be addressed, and organizes other activities. The meetings always include a presentation of a topic on health care. Question and answer periods following the presentation have proved to be highly educational for the fathers. Though the number of fathers who attend the meeting is relatively small compared to those of the clinic area, members are encouraged to talk with their relatives and friends. The clubs also engage in fund-raising activities. One clinic was able to purchase a generator.

As fathers have come to understand the need for immunization, proper nutrition, breastfeeding, and growth monitoring, they have learned to encourage their wives to take their children to the clinics. Fathers have also been successful in encouraging other fathers to attend the meetings.

WESTERN SAMOA/Village Women's Committees

Since the formation of the first village women's committee, Komitis, several centuries ago, the committee's involvement in the public health administration of preventive health measures and primary health care has been rapidly gaining momentum. Through sanitation programs and maternal and child welfare clinics, village women's committees have virtually eradicated filariasis, yaws, and other endemic diseases. Infant mortality rates are significantly reduced and village sanitation has greatly increased. Today, the more active committees maintain health centers and/or district hospitals while other committees concentrate on fund-raising, selection of village health aides, and training of village health workers.

These women's committees are regarded very highly by the government for their work in the primary health care field. The women's committee is the only locally-based committee that communicates constructively with the Health Department on rural health issues. Direct communication through the District Nursing Service enables the women's committees to further extend their responsibilities and influence. The Health Department, recognizing the positive work, is ambitious about future work with the women's committees. It plans to standardize training programs of VHWs and would like to encourage more women's committees to start VHW training programs. The government is also eager to combine the primary health care program with parts of the village development program, whose work often relates directly to the health field. According to the government, this merger would be an ideal place for the women's committees to work.